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ABSTRACT

This publication for middle- and junior-high school students contains teaching units on aging. The units themselves are not intended to be immediately usable in the classroom. They require the teacher to first learn something about aging. The units require tailoring to specific classroom situations. The first five sections contain units for the following disciplines respectively: English, social studies, science, mathematics, and physical education. Each unit contains a general introduction to the topic of aging, objectives which a unit on aging should cover, procedures to use suggestions for learning activities, and sample evaluation instruments. Bibliographies of print and nonprint materials are interspersed throughout. Some examples of activities follow. Students read and discuss biographies of men and women who were productive and creative in their final years. They interview aged persons, take field trips, and view films. (Author/RM)

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AGING EDUCATION
FOR
THE JUNIOR HIGH/MIDDLE SCHOOL YEARS

ENGLISH

SOCIAL STUDIES

SCIENCE

MATHEMATICS

PHYSICAL EDUCATION

1979

John W. Myers, Ph.D.
Tennessee Technological University
Cookeville, Tennessee
38501

SO 013 488

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FOREWARD:

This compilation of teaching units for the junior high/ middle school level is aimed at providing a coordinated set of curricular materials for teaching about aging and the aged. Each unit, in similar manner, deals with one of the five major content areas commonly found in junior high/middle school curricula. They are so designed as to be usable to the individual teacher, and serve equally well for an integrated building-wide program of aging education.

The objectives upon which the units are based were defined as part of the author's dissertation in 1977, "Aging Curricula for the Public School: Objectives and Materials." These objectives represent the consensual opinions of a number of public school aging educators across the country as to what should be taught concerning aging and the aged at various grade levels.

The units themselves are not intended to be immediately usable in the classroom. They require the teacher to first learn something about aging and the aged in America himself, before he tries to teach others. The units require tailoring to specific classroom situations. The broad guidelines as to objectives and activities are here; the specific implementation is left to the user. This omission of the final step for classroom implementation if intentional. It is the belief of the author, as well as of other aging educators, that if public school aging education is to occur, it must be carried out by teachers who have gained a basic knowledge of the subject, have come to grips with the "myths" of aging themselves, and are thereby prepared to step into the classroom to teach others. When one teachs about aging, one is teaching about life, a highly relevant subject to teacher and student alike. The design of this text will insure that you are ready. Any good general text on aging, such as the Bert Smith text, Aging in America, can give you the basic knowledge you need to begin.

AGING EDUCATION
FOR
THE ENGLISH CLASSROOM:
JUNIOR HIGH/MIDDLE SCHOOL

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INTRODUCTION:

Why should you want to teach about aging and the aged in your classroom? Why should you continue examining this teaching unit? There are many reasons:

1. Everyone ages; it is a continuing lifespan process. Yet most Americans are ignorant as to what aging is; they commonly accept a mythology of aging which paints the aging process as something to be feared. Aging education can disprove the myths.

2. Most Americans fear aging and, particularly, "old age." People see growing older as a path leading to death; old age becomes the time during which one waits to die. It is often a time of illness, economic insecurity, and depression. Aging education can ease the fear.

3. Children, as young as pre-school, note differences in adults of differeing ages. By the time a student reaches your classroom, he has had six to seven years exposure to the myths of aging. The older he gets, the more he will think about aging, the more his fear will grow. Negative attitudes, and resultant behavior toward older persons, begin to form early. Studies of children's perceptions of age (Hickey and Kalish, 1968: Hickey, Hickey, and Kalish, 1968; Jantz and Seefeldt, 1976) document the gradual formation of these negative attitudes and beliefs.

4. Research indicates that you can effectively alter these attitudes in your classroom. Studies like that by Baltes and Labouvie-Vief (1976) show what can be accomplished in only a short period of time with standard types of classroom materials.

Other programs, which have utilized "intergenerational relationships," social interaction between young and old, have achieved phenomenal success in relatively short periods of time.

5. Students react positively and enthusiastically to aging education. Student responses to programs like the Teaching-Learning Communities (T-LC) program in Ann Arbor, which brings older citizens into art classes to teach such skills as lace making, have been excellent (Mehta, 1976). Reactions to other intergenerational programs across the nation have ranged from good to outstanding.

6. Students exhibit a high degree of interest in aging and the aged, once they get into the subject. Knowledge about aging provides answers to questions they have about their own aging, and that of their parents, grandparents, and friends. Students perceive the subject as very relevant to life as they are living it.

7. Bureau of the Census projections indicate that, by the year 2000, one out of every five persons living will be over 65 years of age. Your students will likely find themselves, in the 21st. Century, part of a society that caters to the older citizen, in much the same way that today's society emphasizes youthful interests. What a sad situation it may be, if a majority of those elders accept the negative myths of aging, and are unaware of the facts. "Old" people, like students in your classroom, tend to live up to our expectations of them.

OBJECTIVES:

In late 1976, a group of leaders in the development of aging curriculum materials for the public school were polled to determine those areas within the broad field of aging that should be part of a K-12 curriculum on aging in a public school. From the consensus of opinion of these experts evolved a K-12 listing of objectives for public school aging curricula. The researcher categorized the objectives by grade level. The objectives defined for the junior high/middle school level were as follow:

1. Provide opportunities for the establishment of intergenerational relationships.

2. Provide opportunities for examination fo personal and societal attitudes toward aging and the aged, to include:

    a. Examination of aging stereotypes.

    b. Examination of common myths of aging.

3. Provide a profile of the aged in America, past, present, and future, to include:

    a. Demographic data to support trends.

    b. Comparison with other times and cultures.

    c. Retirement in America.

    d. Institutionalization in America.

4. Provide an understanding of aging as a lifespan process, to include:

    a. The general life stages through which we age.

    b. The visible biological and psychological changes resulting from the aging process.

5. Provide preparation for aging, to include:

    a. The need for lifespan learning.

b. Planning for use of leisure time and recreation.

c. Old age as a perspective, an achievement.

d. Death as a natural phenomenon.

e. Vocabulary building.

PROCEDURES: ORGANIZATION AND EVALUATION:

Any unit on aging, then, should strive to meet these five objectives, or as many of them as seem appropriate to the given subject area. Objectives 1 and 2 are felt to be appropriate to all subject areas. Objective 3 seems to mesh well with the social studies area; objective 4, with science. Parts of objective 5 seem best suited to physical education. This is not to say that a given objective should lie in a certain subject area exclusively, nor that the meeting of all the objectives and sub-items is necessary. The purpose of aging education at the Junior High/Middle School grade level should be to introduce some formal classroom instruction on aging and the aged. The instruction should not be in-depth, but should hit high points, those likely to interest the student and seem most relevant to his life. The period of formal instruction, however, should not be the major emphasis at levels below eighth grade. Formalized classroom instruction may be as brief as one or two weeks in length, or it may be spaced over the period of the school year.

By far the most important part of any aging curriculum is the use of intergenerational experiences, and the incidental activities which cause the student to stop and re-examine his attitudes and beliefs. The facts he learns in a lecture or as part of a research project will definitely affect his attitudes toward aging and the aged, but, in order to achieve long lasting behavioral changes, the student must experience contact with adults at various stages of age. One does not learn to ride a bicycle by reading a book about it; one climbs on and pedals. Likewise, cognitive learning of the factual matter of aging is insufficient. Intergenerational relationships are the key to effective aging curricula. Experiences with older persons, coupled with a good basic factual knowledge, should result in long lasting attitudinal change. Generally speaking, a year's instruction in aging might be structured as follows. Students might be pre-tested at the beginning of the school year to determine how accurate their knowledge of aging and the aged is. They should also be told that a number of intergenerational experiences have been planned: tutors, guest speakers, field trips, and so forth. During the first half of the year, you might teach incidentally as opportunities present themselves. Should a student comment on how dynamic a certain elderly teacher's aide is, the time may be right for a class discussion about stereotypes. Values clarification type activities aimed at aging and the aged might also be used for variety. A formal period of instruction might be presented after eight or nine weeks of class. Prior to the instruction, students should be tested again with the same instrument as before (often a true or false test reflecting common aging myths) and the results compared. Some scores should improve simply through the effects of having older persons in the classroom. After the period of instruction is concluded, students should again be tested with the instrument, or a variant form, to determine what learning has accrued as a result of formal classroom instruction. Based on these results, and class interest, you may choose to explore some area of aging in more depth, or may continue throughout the balance of the year with incidental teaching and intergenerational experiences. At the end of the school year, students might be tested once more for retention of what they learned during the formal classroom period and in their relationships with elders.

TEACHING THE UNIT:

The remainder of this unit is concerned with specific suggestions for activities and methods for meeting the five objectives in your particular subject area. Materials are arranged as follows:

1. A statement of the objective.
2. A brief rationale for the objective.
3. Suggested activities and strategies.
4. Suggestions for evaluation.

Included also is a sample evaluation instrument, a listing of works featuring older characters, a listing of films with sources, and a bibliography aimed at the junior high level.

OBJECTIVE 1:

Provide opportunities for the establishment of intergenerational relationships.

Rationale

Analysis of the results of programs which rely heavily on the effects of intergenerational relationships suggests that the key to successful aging education is exposure of the young to situations in which they may come to know an "old" person on a one-to-one basis. Such nationwide programs as the Generations Alliance Program of the American Association of Retired Persons, the Hand-in-Hand Cross Age Interactions Project of the Girl Scouts of America, and the Youth Conferences on Older Americans initiated by the National Retired Teachers Association have reported phenomenal success in changing attitudes of the young toward aging and the aged.

Suggested Activities and Strategies

1. Bring older adults into the classroom. In many schools across the nation, retirees and other older citizens volunteer to serve in the schools in a variety of ways. In New York City, Los Angeles, and Miami, elders serve as tutors in the public schools, with surprising results. The greater patience of many older tutors makes them ideal for working with slow learners; the tutors find their volunteering meets a real personal need. In the schools of Ann Arbor, Michigan, older citizens are guest teachers, called "Grandpersons," in art classes, teaching such skills as lace making. Consider the value of having a local poet or literary figure come into your classroom to talk about their genre. Indeed, there may be as colorful a figure as Robert Frost living in your own community.

Retired public school and university faculty may make excellent speakers. Older volunteers may also serve as teacher aides, with duties ranging from tutoring, through preparation of teaching materials, to clerical duties. In cases where school-wide or district-wide volunteer programs are undertaken, funding may be available. In the Ann Arbor program, the Retired Senior Volunteer Program (RSVP) supplies lunches and transportation for participating volunteers For complete information on setting up funded volunteer programs, contact the National School Volunteer Program, Inc., 300 North Washington Street, Alexandria, Virginia, 22314. For the individual teacher, however, the best way to begin is to contact local community service groups, "Golden Age" clubs, and the like for leads. A small advertisement in the local newspaper might produce more willing volunteers than you could use. Often, older people in our society sit home not knowing how to become more involved with the mainstream of life. Many would jump at the opportunity to be of service. Be sure, however, to screen applicants carefully, so as to avoid inadvertantly reinforcing the old myths and stereotypes in your classroom.

2. Take students into the community. Ask students to conduct community inventories of the aged Ask them to interview older neighbors. With a bit of prior coordination, visits by students to retirement communities or rest homes can be arranged. Be cautious in arranging visits to nursing homes, since such trips might prove depressing to adolescents. As part of a study of institutionalization, with proper preparation, such a visit

would be appropriate.

3. Take a mixed group of young and old on a field trip. Ask your students to undertake a community service project in partnership with a local "Golden Age" group, garden club, or a similar organization. During the summer of 1976, the San Francisco Bay area Girl Scout Council sponsored a group of teenagers and older citizens on a field trip to trace the route followed by Lewis and Clark. Certainly, in any geographic area, there are attractions of literary significance worthy of a field trip. Plays featured at local university theatres might be a good way to begin.

Suggestions for Evaluation

1. Pre-test and post-test. If you pre-test students as to their factual knowledge about aging and the aged at the beginning of the school year, and test with a similar intergenerational relationships may be identified. Relationships of a meaningful nature cannot be forced; they take time to develop. You can only provide opportunities for positive relationships to form. If indeed such relationships do develop, then it is logical to assume that student attitudes will change somewhat, and that some of the truths about aging and the aged will be gained through the social interaction of the two persons involved.

2. Teacher observation. You might keep a log, charting the progress of intergenerational relationships. If older persons are coming into the classroom on a regular basis, it

should be easy to note changes in student behavior and attitude over a period of time.

3. Value sheets. Students may be asked to complete a series of open-ended sentences about old people prior to introducing intergenerational relationships, and again prior to formal aging instruction. A positive change in attitudes reflected on the sheets may indicate a successful relationship between the two parties involved.

4. Talk with the student. Ask the student how he feels that his attitudes have changed since the introduction of intergenerational activities. If he can see no change, then chances are a close relationship has not developed.

OBJECTIVE 2:

Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

a. Examination of aging stereotypes.

b. Examination of common myths of aging.

Rationale

Even though examination of personal and societal attitudes should result as intergenerational relationships develop, it is not enough to rely on chance. Since the common stereotypes and myths of aging are accepted as truth by most students, one of the most effective strategies for teaching about aging is to challenge those stereotypes and myths directly. A student who has always believed that "you can't teach an old dog new tricks" is often motivated to learn more when he finds that the statement is not true of his grandparents. He may also be startled to learn that age has nothing to do with loss of teeth. Such revelations are motivating, and the student begins to question, and seek the truth.

Suggested Activities and Strategies

1. Class discussions. Capitalize on moments of opportunity; if a student comments on old people in general, or on an older person in particular, steer the class into a discussion of stereotypes and myths about aging and the aged. An excellent text for teacher or student is Bert K. Smith's Aging in America (Boston: Beacon Press, 1973), available in paperback for about $4.00. It is well written, giving a clear presentation of aging and the problems of the aged in America. Often such a class discussion generates interest in becoming more deeply involved with aging education in the classroom. A lively discussion may serve to launch a formal classroom unit on aging.

2. Ask students to read biographies of men and women who were productive and creative in their final years. Many figures in English and American literature wrote well into their later years. Authors, like vintage wine, tend to improve with age and experience. Sophocles wrote Oedipus Rex after 60 years of age; DeFoe created Moll Flanders and Robinson Crusoe while in his sixties. Goethe completed the second part of Faust at age 82. Robert Frost was productive into his later years. If student interests lie outside English, let them read biographies of people like Churchill, Toscanini, Verdi, Michelangelo, and Louis Pasteur. All were productive members of society into their seventies and eighties. When students

have finished reading, ask them how these people fit the mold as "old" people. Do the people about whom they have read support the mythology of aging, or refute it? If you desire to provide students with knowledge of aging stereotypes and common myths prior to the reading assignment, the unit bibliography lists several good sources of information.

3. Ask students to look at characterization of the aged in literature. First, provide students with some knowledge about aging stereotypes and myths. The Smith text can provide information to support a lecture or discussion session. Once students have a basis for comparison, ask them to examine stories from their literature books, assigned novels, plays, or poems, to determine how accurately the writer characterizes his older characters. Do they reflect true portraits of the aged, or are they stereotypes? Such an approach to a short story like Hawthorne's "Dr. Heidegger's Experiment" can produce new insights for the student.

In Hawthorne's tale, four aged people try to recapture their youth by drinking a fabulous elixir from the famous "fountain of youth." The student, armed with knowledge of fact and myth, can easily pick out the author's image of the aged person. He can note the discrepancies between Hawthorne's characters and reality. Hawthorne shows his characters as "withered" and "melancholy" persons, plagued with gout and other diseases of old age. He tells the reader that their early years were their best ones and that all four lack "vigor."

They are often "beside themselves," worried by "troubles" and recollections," "as is not unfrequently the case with old people." Consider that the reader gains all this information in only the first paragraph of the story, and that it is only about 50 percent accurate, so far as actual characteristics attributable to aging is concerned. Dr. Heidegger himself is pictured as "eccentric" and harmless, wrapped up in memories of his past. All of the four, of course, yearn for the days of their youth. They are described as "gray, decrepit, sapless, miserable creastures." And so it goes throughout the story, as the author paints an unrealistic picture of the aged, but one not so different from our present day stereotypes.

The student can go through the story, if desired, with a fine tooth comb, putting together a detailed picture of Hawthorne's elders. In class discussion, this stereotype and the realities of the aging process might prompt the student to seek to examine other works by the same or another author of the period to see if the image is consistent. This approach rests on the assumption that stereotypes held by authors in specific periods are likely to be reflected in their works. Thus, your class might choose to examine a particular literary period by focusing on reflected stereotypes. Focusing as it were on a particular facet of a writer's work should contribute to a fuller understanding of the literary techniques of characterization, and the idea that a writer often reflects the attitudes and ideas of his time. A listing of other works which characterize older persons appears near the end of this unit.

Suggestions for Evaluation

1. Attitudinal evaluation. Changes in attitudes might be noted by applying the evaluation techniques listed with objective 1: pre-testing and post-testing, using value sheets, and talking with students.

2. Cognitive evaluation. Knowledge of stereotypes and myths of aging can be measured through the use of objective tests. The measurement instrument suggested for objective 1 would adequately measure student retention of factual data. Essay tests might be used also to evaluate student understanding and knowledge. Students might be asked to create a fictional elder, who accurately reflects the truths of aging.

OBJECTIVE 3:

Provide a profile of the aged in America, past, present, and future, to include:

a) Demographic data to support trends.
b) Comparison with other times and cultures.
c) Retirement in America.
d) Institutionalization in America.

Rationale

In order to understand what it is to grow old in America, students need some basic data. It is not enough to point out that myths about aging and the aged abound in our society. Students are likely to want to learn how and why these myths developed. If the old are maligned now, what about in the future, when their parents, or they themselves are old? They may ask about the results of the myths and stereotypes on the old in society, and wonder about retirement and institutionalization, in view of the facts they learn about aging and the aged. An in-depth profile of the aged is not necessary at the junior high/middle school level; it is sufficient to hit high points and examine areas likely to be of interest to adolescents.

Suggested Activities and Strategies

1. If you are the only teacher in your building dealing with aging, then you may wish to provide a brief profile. If student interest so dictates, you may wish to further investigate areas included within this objective. In either case, a fine source for information is the previously mentioned text by Bert Smith. Brief profiles of the aged in America can be handled well in lecture and discussion sessions, supported by one or more of the films and other resources listed at the end of this unit. While the content covered under this objective is most properly a social studies concern, if you are your students' only chance to learn about aging and the aged, then you may want to invest time in objectives other than 1 and 2. Should you decide to do so, check the other units in this series for specific recommendations and strategies. Other units in format similar to this have been prepared in the areas of social studies, science, mathematics, and physical education.

2. If a social studies teacher is teaching about aging also, or if you do not desire to spend time on all the objectives, then limit yourself to objectives 1 and 2 as a minimum

and leave profile information to your colleague. Treat this objective as an area for incidental teaching in the English classroom. Should students express a desire for some demographic information, be prepared to lead a class discussion in general terms, but coordinate with your social studies colleague to insure that a somewhat more detailed approach occurs in his course of study. It is assumed that, if other teachers are involved in the teaching of aging related materials, a high level of planning and coordination will occur, perhaps even some teaming.

Suggestions for Evaluation

Unless you actually teach formally to meet this objective, it is recommended that no attempt be made at evaluation. Should you choose to teach it formally, follow the suggestions included in the unit prepared for social studies, then evaluate according to the recommendations of that unit.

OBJECTIVE 4:

Provide an understanding of aging as a lifespan process, to include:

a. The general life stages through which we age.

b. The visible biological and psychological changes resulting from the aging process.

Rationale

The question inevitably asked by students when studying aging is "What *is* aging, and how does it work?" An understanding of aging as a process continuing throughout life depends upon some knowledge of the stages through which we age and the common biological and psychological changes associated with these stages. The intention, once again, at the seventh and eighth grade level is not to provide an in-depth treatment of the subject, but to survey the high points. Students will have heard the terms "childhood," "adolescence," "middle age," "old age;" they may have wondered where one stage ends and another begins. Many students will feel that one day you are an adolescent, then something magical occurs, and you are suddenly an adult. They will also have noted in society the gray hair, the "age spots," the wrinkles common to "old age," and they will wonder how those things happen. They will have seen bent and sickly "old" people on the street and asked themselves if they will eventually be that way too. Your students are naturally curious; you need to provide enough answers to satisfy that curiosity.

Suggested Activities and Strategies

1. Once more, if you are the only teacher in the building dealing with aging, then you may find yourself compelled by student questions to cover the processes of aging, its stages and visible changes, in some depth. Smith's Aging in America covers the subject nicely, as do the other references listed in the bibliography under "Aging." An excellent source for students is Lorus Milne's The How and Why of Growing (New York: Atheneum Press, 1972), which deals with the lifetime process of maturing and also includes an excellent discussion of death.

Whereas the texts listed in the bibliography are generally technical and detailed in nature, the Milne book is designed for use at the sixth through eighth grade levels. The subject can be handled well in lecture and discussion, supported by one or more of the films listed at the end of the unit. While this objective is most properly a science concern, if you are the students' only opportunity to gain the information, then you may choose to invest more time and effort in meeting this objective. In such a case, examine the science unit in this series for specific activities and strategies.

2. If a science teacher in your building is also dealing with aging, this objective is best left to him. Treat the objective, however, as another area for incidental learning in the English classroom. Someone will ask "What is aging?" and you should be prepared to field the question. A class discussion may whet appetites for learning more about the processes of aging in science class. Once again, it is assumed that a good deal of coordination will occur between teachers.

Suggestions for Evaluation

Unless you actually teach formally to meet this objective in your classroom, it is recommended that no attempt be made at evaluation. Should you choose to teach it formally, follow the specific recommendations included in the unit prepared for science, and evaluate as indicated in that unit.

OBJECTIVE 5:

Provide preparation for aging, to include:

a. The need for lifespan learning.
b. Planning for use of leisure time and recreation.
c. Old age as a perspective, an achievement.
d. Death as a natural phenomenon.
e. Vocabulary building.

Rationale

Certainly, in giving students the knowledge and experiences inherent in objectives 1 through 4, you are preparing them for aging, but objective 5 addresses itself to building attitudes that will allow students to age gracefully, to approach middle and old age not only free from the myths of aging, but ready to live the last stages of life to their fullest. Smith's text offers several examples of people who reached their "golden years" only to find that they were far from golden. Retirement can become a time of boredom, isolation, and lack of purpose. The money that seemed sufficient for retirement 30 years before, suddenly is not enough. Many approach their later years with dread, and literally wait around to die.

This fifth objective is everyone's business. If neither incidentally or through more formalized instruction, each teacher is able to foster in students a belief that learning throughout life is a necessity; if teachers can interest students in sports, hobbies, and activities that will last a lifetime; if teachers can convince students that old age need not be a time of sadness; if teachers can ease the fear associated with death; if teachers can give students the words to bring their thoughts about life, death, and aging into the open, then those students may reach their later years prepared psychologically and physically for a life that is truly "golden."

Suggested Activities and Strategies

1. In the area of nurturing the desire for lifespan learning, formal instruction is probably best left to the science teacher, who can nicely tie the topic into instruction on changes associated with aging. Incidental teaching opportunities will likely occur during discussions of aging in the classroom, particularly if students have been exposed to an alert and knowledgeable older volunteer or two.

2. Perhaps the best thing an English teacher can do to encourage planning for use of leisure time is to try to get students to make recreational reading a part of their lives. Reading is surely one of those pastimes that can bring enjoyment, regardless of age. Suggestions for accomplishing this may be found in Improving Reading in Every Class by Ellen Thomas and H. A. Robinson (Boston: Allyn and Bacon, 1972). Students who display interest in writing poetry or short stories can be encouraged to continue to do so.

3. The English teacher can foster a positive attitude toward old age by pointing out how it may be viewed as an achievement, a perspective from which to view life. Smith provides several examples of older citizens whose retirements were "golden" times of life, the best years of all. The old plan well and heed their own accumulated wisdom, seldom make

the errors of youth. Old age, free from serious illness, can indeed be the best time.

4. Death is a subject that has long been a theme in literature. You can help the student to come to terms with death as a natural phenomenon, a part of life, by asking the student to read works which reflect the idea that, in many ways, it is death that gives real value to life. This is the premise of the Kubler-Ross texts listed in the unit bibliography; a reading of either of her two works will prepare the teacher to handle the subject in class. Students can be asked to read such works as those listed below, and then asked in class discussion to evaluate the book's attitude toward life and death. All of these works deal with death and dying in a positive way:

Brian's Song, by William Blinn
Burning Grass, by Cyprian Ekwenski
Death Be Not Proud, by John Gunther
Ellen, by Rose Levit
Emily of Deep Valley, by Maud H. Lovelace
Eric, by Doris Lund
Fog, by Mildred Lee
I Heard the Owl Call My Name, by Margaret Craven
Kep, by Zachery Ball
May I Cross Your Golden River?, by Paige Dixon
Sounder, by W. H. Armstrong
Sunshine, by Norma Klein

The Diary of a Young Girl, by Anne Frank

The Memory of Old Jack, by Wendell Berry

5. One of the results of a study at the University of Maryland by Jantz and Seefeldt (1976) on children's perceptions of age was that children who exhibit the least understanding of aging and knowledge of older people also have in their vocabularies the fewest words dealing with old age. Since vocabulary growth is commonly dependent on breadth of experience, it is likely to suspect that your students would exhibit the same type of correlation between understanding and vocabulary. Vocabulary may therefore serve as an indicator of a student's initial level of knowledge and experience with aging and the aged. Teachers in all subject areas should strive to provide, along with the activities and strategies cited, opportunities for increasing vocabulary. Some of the activities suggested in the Tomas and Robinson text cited above are applicable to building an aging vocabulary. Students who do not understand the terminology cannot easily grasp the subject matter of aging.

Suggestions for Evaluation

It is recommended that no formal evaluation be undertaken for this objective, since proper evaluation will not be possible until students join the rank of the older citizen. Only a longitudinal study will be able to ascertain how well prepared the student was for aging. Sub-items within objective 5, however, may be evaluated by objective means. Student retention of factual matter concerning death, for instance, can be assessed through a short objective test. Comprehension of vocabulary terms may be evaluated in a similar manner.

CONCLUSION:

Although this unit is nearly ended, you are not yet ready to introduce aging education into your classroom. The unit has provided you with valid general course objectives for teaching about aging. It has suggested activities and strategies for meeting those objectives; it has recommended texts and films as resources and classroom aids. The unit has offered suggestions for evaluating your success in meeting the course objectives.

Now it is your turn. Your class is unique; your students are individuals with specific needs. Based on your knowledge of your particular teaching situation, availability of resources and materials, and the needs of your students, you should tailor this unit to your teaching needs. Pick and choose the strategies that will work in your classroom with your students. Select carefully from what is offered and arrange it to be most effective in your hands. It is up to you to structure the specific course of study, to decide on length, sequence, and the specific methods of teaching and evaluation. You should be able to set specific objectives which will result in fulfillment of the larger course objectives. The purpose of this unit has been to point the direction, to provide the starting point, and to walk down the road with you a bit. From here on, the success of aging education in your classroom depends on you.

SAMPLE EVALUATION INSTRUMENT

INSTRUCTIONS TO STUDENTS: Please circle T or F (true or false) below.

T F 1. Loss of teeth is a result of old age.

T F 2. The older you get, the harder it is to learn new things.

T F 3. Intelligence decreases as you get older.

T F 4. Old people are always sick.

T F 5. Old people cannot remember anything.

T F 6. Old people and young people have nothing in common.

T F 7. All people age at the same rate.

T F 8. Old people rarely bother to vote.

T F 9. You are "old" at age 65.

T F 10. You go "downhill fast" after age 65.

(KEY: All items are false)

Literary works which portray older characters as individuals, not as stereotyped figures:

SHORT STORIES

1. "A Time of Greatness," in The Hanging Tree, by Dorothy Johnson.
2. "Another April," by Jesse Stuart, in This Is My Best, edited by Whit Burnett.
3. "Counting Coup on a Wounded Buffalo," in American: The Life of a Great Indian, by Frank Linderman.
4. "Neighbor Rosicky," in Obscure Destinies, by Willa Cather.
5. "Old Lady Mandle," in One Basket, by Edna Ferber.
6. "Old Man Warner," in Harvest of Stories, by Dorothy Canfield.
7. "Scars of Honor," in Indian Country, by Dorothy Johnson.
8. "The Beginning of Wisdom," by Rachel Field.
9. "The Heyday of the Blood," in Harvest of Stories, by Dorothy Canfield.
10. "The Law of Life," in The Best Stories of Jack London, by Jack London.
11. "The Old Demon," in Today and Forever, by Pearl Buck.
12. "The Old Man," in Selected Short Stories of Isaac Bashevis Singer, by I. B. Singer.
13. "Time," in The Best of H. E. Bates, by H. E. Bates.
14. "To Hell With Dying," by Alice Walker, in The Best Stories by Negro Writers, edited by Langston Hughes.
15. "Uncle Grant," by Reynolds Price, in Modern Short Stories: the Uses of Imagination, edited by A. Mizener.

SHORT NOVELS

1. High Elk's Treasure, by Virginia Driving Hawk Sneve.
2. J. T., by Jan Wagner.
3. Old Ramon, by Jack Schaefer.
4. Place and Time, by Barbara Schoen.
5. The Family Chronicle, by S. T. Aksakov.
6. The Golden Touch, by Annabel and Edgar Johnson.
7. The Good Earth, by Pearl Buck.
8. The Poorhouse Fair, by John Updike.
9. The Unmaking of Rabbit, by Constance Green.
10. Our Mrs. Meigs, by Elizabeth Corbett.
11. Trouble River, by Betsy Byars.

Other literary works which present stereotyped older characters are as follows:

SHORT STORIES

1. "A Dull Store: From the Notebook of an Old Man," in Ward Six and Other Stories, by Anton Chekhov.
2. "A Visit of Charity," in Selected Stories, by Eudora Welty.
3. "Ashes," in The Devil's Storybook, by Natalie Babbitt.
4. "Leaving the Yellow House," in Mosby's Memoirs and Other Stories, by Saul Bellow.
5. "Nancy," in The Moment Before the Rain, by Elizabeth Enright.
6. "Old Esther Dudley," in Twice-Told Tales, by Nathaniel Hawthorne.
7. "Rip Van Winkle," in The Sketch-Book, by Washington Irving.
8. "The End," in Stories and Texts for Nothing, by Samuel Beckett.
9. "The Gentleman from San Francisco," in The Gentleman from San Francisco, by Ivan Bunin.
10. "The Manager," in The Hat on the Bed, by John O'Hara.
11. "The Old Man and the Last Ambush," in The Plainsmen, by Jack Schaefer.
12. "The Wise Old Women," in The Sea of Gold and Other Tales from Japan, adapted by Yoshiko Uchida.
13. "Why the Woodpecker Has a Long Beak," in Roumanian Bird and Beast Stories, by D. M. Gaster.

SHORT NOVELS

1. A Paper Dragon, by M. D. Moskin.
2. As We Are Now, by M. Sarton.
3. Baba Yaga, by Ernest Small.

4. Grandma Didn't Wave Back, by Rose Blue.
5. The Alien Light, by J. Crichton-Smith.
6. The Diary of an Old Man, by C. Bermant.
7. The Pigman, by Paul Zindel.
8. The Red Pony (middle section), by John Steinbeck.
9. The Witch's Brat, by Rosemary Sutcliff.
10. They, by M. Mannes.
11. Windmill Summer, by Hila Feil.
12. The Witch of Blackboard Pond, by Elizabeth Spears.

DRAMA

1. Ceremonies in Dark Old Men, by Lon Elder.
2. I Never Sang For My Father, by Robert Anderson.
3. The Effect of Gamma Rays on Man-in-the-Moon Marigolds, by Paul Zindel.

AGING EDUCATION
FOR
THE SOCIAL STUDIES
JUNIOR HIGH/MIDDLE SCHOOL

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INTRODUCTION:

Why should you want to teach about aging and the aged in your classroom? Why should you continue examining this teaching unit? There are many reasons:

1. Everyone ages; it is a continuing lifespan process. Yet most Americans are ignorant as to what aging is; they commonly accept a mythology of aging which paints the aging process as something to be feared. Aging education can disprove the myths.

2. Most Americans fear aging and, particularly, "old age." People see growing older as a path to death; old age is a time during which one waits to die. Often it is a time of illness, economic insecurity, and depression. Aging education can ease the fear.

3. Children, as young as pre-school, note differences in adults of differing ages. By the time a student reaches your classroom, he has had six or seven years exposure to the myths of aging. The older he gets, the more he will think about aging, the more his fears will grow. Negative attitudes, and resultant behavior toward older persons, begin to form early. Studies of children's perceptions of age (Hickey and Kalish, 1968; Hickey, Hickey and Kalish, 1968; Jantz and Seefeldt, 1976) document the gradual formation of these negative attitudes and beliefs.

4. Research indicates that you can effectively alter these attitudes in your classroom. Studies like that by Baltes

and Labouvie-Vief (1976) show what can be accomplished in only a short period of time with standard types of classroom materials. Other programs, which have utilized "intergenerational relationships," social interaction between young and old, have achieved phenomenal success in realtively short periods of time.

5. Students react positively and enthusiastically to aging education. Student repsonses to programs like the Teaching-Learning Communities (T-LC) program in Ann Arbor, which brings older citizens into art classes to teach skills such as lace making, have been excellent (Menta, 1976). Reactions to other intergenerational programs across the nation have ranged from good to outstanding.

6. Students exhibit a high degree of interest in aging and the aged, once they get into the subject. Knowledge about aging provides answers to questions they have about their own aging, and that of their parents, grandparents, and friends. Students perceive the subject as very relevant to life as they are living it.

7. Bureau of the Census projections indicate that, by the year 2000, one out of every five persons living will be over 65 years of age. Your students will likely find themselves in the 21st. Century, part of a society that caters to the older citizen, in much the same way as today's society emphasizes youthful interests. What a sad situation it may be, if a majority of those elders accept the negative myths

of aging, and are unaware of the facts. "Old" people, like students in the classroom, tend to live up to our expectations of them.

OBJECTIVES:

In late 1976, a group of leaders in the development of aging curriculum materials for the public school were polled to determine the areas within the broad field of aging that should be part of a K-12 curriculum on aging in a public school. From the consensus of opinion of these experts evolved a K-12 listing of objectives for public school aging curricula. The researcher categorized the objectives by grade level. The objectives defined for the junior high/middle school level are as follow:

1. Provide opportunities for the establishment of intergenerational relationships.
2. Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:
    a. Examination of aging stereotypes.
    b. Examination of common myths of aging.
3. Provide a profile of the aged in America, past, present and future, to include:
    a. Demographic data to support trends.
    b. Comparison with other times and cultures.
    c. Retirement in America.
    d. Institutionalization in America.

4. Provide an understanding of aging as a lifespan process, to include:
    a. The general life stages through which we age,
    b. The visible biological and psychological changes resulting from the aging process.
5. Provide preparation for aging, to include;
    a. The need for lifespan learning.
    b. Planning for use of leisure time and recreation,
    c. Old age as a perspective, an achievement,
    d. Death as a natural phenomenon.
    e. Vocabulary building.

PROCEDURES: ORGANIZATION AND EVALUATION:

Any unit on aging, then, should strive to meet these five objectives, or as many of them as seem appropriate to the given subject area. Objectives 1 and 2 are felt to be appropriate to all subject areas. Objective 3 seems to mesh well with the social studies; objective 4 with science, Parts of objective 5 seem best suited to physical education, This is not to say that a given objective should lie in a certain subject area exclusively, nor that the meeting of all the objectives and sub-items is necessary. The purpose of aging education at the junior high/middle school level should be to introduce some formal classroom instruction on aging and the aged. The instruction should not be indepth, but should hit high points, those likely to interest the student and seem most relevant to his life. The period of formal instruction, however, should not be the major emphasis of aging education at levels below eighth grade. Formalized classroom instruction may be as brief as one or two weeks in length, or it may be spaced over the period of the school year.

By far the most important part of any aging curriculum is the use of intergenerational experiences, and the incidental activities which cause the student to stop and reexamine his attitudes and beliefs. The facts he learns in a lecture or as part of a research project will definitely affect his attitudes toward aging and the aged, but, in order to achieve long lasting behavioral changes, the student must experience contact with adults at various stages of age. One does not learn to drive a car by reading a book about it; one gets behind the wheel and drives. Likewise, cognitive learning of the factual matter of aging is insufficient. Intergenerational relationships are the key to effective aging curricula. Experiences with older persons, coupled with a good basic factual knowledge, should result in long lasting attitudinal change. Generally speaking, a year's instruction in aging might be structured as follows. Students might be pre-tested at the beginning of the school year to determine how accurate their knowledge of aging and the aged is. They should also be told that a number of intergenerational experiences have been planned; tutors, guest speakers, field trips, and so forth. Throughout the year, you can teach incidentally as opportunities present themselves. Should a student comment on how dynamic a certain elderly teacher's aide is, the time may be right for a class discussion about stereotypes. Values clarification type activities, role playing, and simulations aimed at aging and the aged can also be used for variety. After eight or nine weeks of exposure to intergenerational experiences, a formal period of classroom instruction might be presented. Prior to the instruction, students should be tested again with the same instrument as before (normally a true or false test reflecting common aging myths) and the results compared. Some scores should improve simply through the effects of having older persons in the classroom. When the period of formal instruction is concluded, students should again be tested with the instrument, or a variant form, to determine what learning has accrued as a result of formal classroom instruction. Based on these results, and class interest, you may choose to explore some area of aging in more depth, or you may continue throughout the balance of the year with incidental teaching and intergenerational experiences. At the end of the school year, you might test students once more for retention of what they learned during the formal classroom period and in their relationships with elders.

TEACHING THE UNIT:

The remainder of this unit is concerned with specific suggestions for activities and strategies for meeting the five objectives in your particular area. Materials are arranged as follows:

1. A statement of the objective.
2. A brief rationale for the objective.
3. Suggested activities and strategies.
4. Suggestions for evaluation.

Included also is a sample evaluation instrument, a sample retirement questionnaire, a listing of useful films, and a bibliography aimed at the junior high/middle school level. Films and references are categorized for easy match with objectives. These supplementary materials are for use at your discretion.

OBJECTIVE 1:

Provide opportunities for the establishment of intergenerational relationships.

Rationale

Analysis of the results of programs which rely heavily on the effects of intergenerational experiences suggests that the key to successful aging education is exposure of the young to situations in which they may come to know an "old" person on a one-to-one basis. Such nationwide programs as the Generations Alliance Program of the American Association of Retired Persons, the Hand-in-Hand Cross Age Interactions Project of the Girl Scouts of America, and the Youth Conferences on Older Americans initiated by the National Retired Teachers

Association have reported phenomenal success in changing attitudes of the young toward aging and the aged.

Suggested Activities and Strategies

1. Bring older adults into the classroom. In many schools across the nation, retirees and other older citizens volunteer to serve in the public schools in a variety of ways. In New York, Los Angeles, and Miami, elders serve as tutors in the schools, with surprising results. The greater patience of many older tutors makes them ideal for working with slow learners; the tutors find that their volunteering helps meet their own personal needs. In the schools of Ann Arbor, Michigan, older citizens are guest teachers in art classes, teaching such skills as lace making. Consider the value of having a retired mayor or judge in to speak about democratic government or a related topic. Instead of simply having students read about World War II or Korea, have a veteran come to school to give the class a slice of personal history. Studies like that by Hagerty at Wayne State University (1973) indicate that young people, when they have started to listen to personal histories of elders, soon come to enjoy seeing history through the eyes of someone who has lived it. Retired university professors of history, sociology, or government can also make excellent classroom resources. Imagine bringing someone like Will Durant into your classroom to discuss historical events. Chances are Durant is not available, but somewhere in your community there are older people for whom subjects within the

social studies have been a lifetime's vocation or avocation. Older volunteers may also serve as teacher aides, with duties ranging from tutoring, through preparation of teaching materials, to clerical duties. In cases where school-wide or district-wide volunteer programs are undertaken, funding is likely to be available. In the Ann Arbor program, the Retired Senior Volunteers Program (RSVP) supplies lunches and transportation for participating volunteers. For complete information on setting up funded volunteer programs, contact the National School Volunteer Program, Inc., 300 North Washington Street, Alexandria, Virginia, 22314. For the individual teacher, however, the best way to begin is to contact local community service organizations, "Golden-Age" clubs, and the like. If you express your desire for older volunteers, leads will materialize. A small advertisement in a local newspaper might produce more willing volunteers than you could use. Often, older people in our society sit at home, not knowing how to become more involved in the mainstream of life. Many would jump at an opportunity to be of service. Be sure, however, to screen applicants carefully; avoid selecting elders who reflect the myths and stereotypes you are trying to counter.

2. Take students into the community. Ask students to conduct community inventories or interviews with aged persons. Specific instructions for conducting such inventories and interviews are included in unit under objective 3. With prior coordination, visits by students to retirement communities or

rest homes can be arranged. Be cautious in exposing students to nursing home environments with insufficient classroom preparation. Such visits can prove depressing for adolescents, if handled improperly. As a study of institutionalization, as described under objective 3, such a visit might be quite appropriate.

3. Take a mixed group of young and old on a field trip. Visit an historical site, a museum, a courtroom; have the entire group meet back in the classroom to discuss the trip and exchange observations. Ask students to join with a local garden club or "golden-age" group to undertake a public service project. Share the responsibility for renovating a playground facility, or cleaning up a public park. If you have the resources, undertake projects that bring young and old together for extended periods of time. During the summer of 1976, the San Francisco Bay area Girl Scout Council sponsored a mixed group of teenagers and elders on a trip to trace the route followed by Lewis and Clark. Certainly, in any geographic area, there are many attractions of historic or social significance worthy of a visit.

Suggestions for Evaluation

1. Pre-test and post-test. If you pre-test students as to their knowledge about aging and the aged at the beginning of the school year, and test again with a similar instrument prior to formal classroom instruction on aging, then successful intergenerational relationships may be identified.

Relationships of a meaningful nature cannot be forced; such things take time to develop. You can only provide opportunities for positive relationships to form. If such relationships do develop, then it is logical to assume that student attitudes will change somewhat, and that some of the truths about aging and the aged will be gained as a result of interaction of the two persons involved.

2. Teacher observation. You might keep a log, charting the progress of intergenerational relationships in the class. If older volunteers are coming into the classroom on a regular basis, it should be easy to note changes in student behavior over a period of time.

3. Values sheets. Students may be asked to complete a series of open-ended sentences about old people prior to introducing intergenerational activities, and again prior to any formal aging instruction. A positive change in attitudes reflected in the sheets may indicate that a successful relationship exists between the two parties involved.

4. Talk with the student. Ask the student how he feels that his attitudes have changed since the introduction of intergenerational activities. If he can see no change, then more than likely a close intergenerational relationship has not developed.

OBJECTIVE 2:

Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

a. Examination of aging stereotypes.

b. Examination of common myths of aging.

Rationale

Even though examination of personal and societal attitudes should result as intergenerational relationships develop, it is not enough to rely on chance. Since the common stereotypes and myths of aging are accepted as truth by most students, one of the most effective strategies for teaching about aging is to challenge the stereotypes directly. A student who has always believed that "you cannot teach an old dog new tricks" is often motivated to learn more when he ralizes that the statement is not true of an elderly person he knows. He may be equally startled to learn that age has nothing whatsoever to do with loss of teeth. Such revelations are motivating; students begin to question and seek the truth.

Suggested Activities and Strategies

1. Class discussions. Capitalize on moments of opportunity. If a student comments on old people in general, or on an older person in particular, steer the class into a discussion of stereotypes and myths about aging and the aged. Often such a discussion generates interest in becoming more deeply involved with aging education in the classroom. A lively discussion may also serve to launch a formal classroom unit on aging. In later discussions, ask students to focus on the part the stereotypes and myths play in determining personal and societal attitudes toward aging and the aged. Lead

them to try to identify those attitudes and to analyze the values upon which they are based. An excellent text for teacher or student use is Bert K. Smith's Aging in America (Boston: Beacon Press, 1973), available in paperback for about $4.00. It is well written, giving a clear presentation of aging and the problems of the aged in society, and provides material for good discussions of attitudes, stereotypes, and myths.

2. Ask students to read biographies. Literally hundreds of persons, past and present, have made valuable contributions to society in their later years. Churchill, for instance, was well into his sixties during the World War II years; he was 76 when last elected Prime Minister. Commonly, senators and Presidents serve well into their sixties. Politics is one area in which the wisdom gained with years is evidently recognized. When students have completed their reading, ask them how the people about whom they have read fit the mold for "old" people. Should you wish to preface this assignment with class discussion of stereotypes and the myths and realities of aging, the unit bibliography lists several good sources of information under "**stereotypes**."

3. Show a film that will spur discussion. The two films listed at the end of the unit under "Dynamic Elders" are both good introductory films. Both are likely to result in discussion of stereotypes and myths of aging. "Don't Stop the Music" is probably most effective for meeting objective 2, with

its actual side-by-side protraits of older Americans who speak for themselves. Some typify the stereotype; others are rugged individualists, alert and full of life. Since this film runs only 18 minutes, it leaves sufficient time for a good introductory discussion.

Suggestions for Evaluation

1. Attitudinal evaluation. Changes in attitudes might be noted by applying the evaluation techniques cited for objective 1: pre-testing and post-testing, values sheets, and talking with students.

2. Cognitive evaluation. Knowledge of stereotypes and myths of aging can be measured through the use of objective tests. The measurement instrument suggested for objective 1 would also effectively measure student retention of factual data. Essay tests might also be used to evaluate student knowledge and understanding. Students might, for instance, be asked to create a ficticious elder who reflects the truths of aging.

OBJECTIVE 3:

Provide a profile of the aged in America, past, present and future, to include:

a. Demographic data to support trends.
b. Comparison with other times and cultures.
c. Retirement in America.
d. Institutionalization in America.

Rationale

In order to understand what it is to grow old in America, students need some basic data. It is not enough to point out that myths about aging and the aged abound in American society. Students are likely to want to learn how and why these myths developed. If the old are maligned now, what about in the future, whn their parents, or they themselves are "old?" They may ask about the effects of these myths and stereotypes on the aged in society, and wonder about retirement and institutionalization, in view of the facts they may have learned. An in-depth profile is not necessary; it is sufficient to hit the high points and examine areas likely to be of interest to young adolescents.

Suggested Activities and Strategies

1. Adopt Aging in America as a class text. This fine survey of aging and the aged is very readable, and most students should be able to handle the vocabulary. It would be advisable for you to pre-teach those vocabulary words associated with aging, so that the student will comorehend their meanings when they appear in the text. A chapter by chapter listing of new vocabulary words would serve admirably to enhance readability and to build a basic aging vocabulary. Resources listed in the unit bibliography can provide the teacher with additional data. The latest edition of the United States Census is a valuable supplementary resource for demographic data. Plan for class discussion of the ideas and factual matter

contained in the Smith text; chances are that students will hit on areas of aging that are of particular interest, which may lead to further more in-depth study as individual research projects.

2. When dealing with demographic data, emphasize that the percentage of persons over 65 is growing rapidly, and that trends indicate a much improved situation for the aged of the 21st Century. Stress the fact that these projections and trends are important because students can expect to be part of that aged population of the next century. The future holds a fascination for us all, and for students, the opportunity to examine trends and to imagine what their own futures will look like in the year 2030 should be highly attractive. Just as technology will change, so will the make up and attitudes of American society. Ask students to write a description of life for the aged in the year 2030, of their own future lives. Based on trends present today, how will the elderly be treated? How will they look and act? What will become of today's stereotypes and myths of aging?

Demographic data can also be used to introduce formal instruction on a profile of the aged. Ask the class which age group has the highest suicide rate in this nation and let them guess the over 65 group. Then, inform them that the same group also has the lowest attempted suicide rate, and ask them how that can be. Why is it that the high percentage of the over 65 age group who wish to commit suicide usually succeed? The answer lies in the way the aged are treated in our society, and with well posed guiding questions, you can lead students to discover this. Once they reach that point, students are motivated to learn how society actually treats the elderly, and why. They are ready to look at retirement, institutions for the aged, and how we compare with other times and cultures in our treatment of the "old." In the unit bibliography, you will find ample resources to support more in-depth treatments of the areas listed under objective 3, to includ additional detailed demographic data.

3. Base class discussions on a film. The listing of films suggests four good films dealing with retirement -- what it too often is, what it could be. "I Think They Call Him John" is depressing in its effect on students. They can easily sense the purposelessness of his day to day existence, the monotony of the self-isolated retiree. The film "Peege" comes highly recommended. It leaves a powerful effect upon young viewers, as they are suddenly forced to see the ending of the film from the perspective of the institutionalized patient. Until that point, they will have been relating to the visitors. The film is likely to motivate a good deal of discussion and interest in our treatment of the aged. "Old Age" deals with the ways different nations treat their aged.

4. Conduct a simulation. The listing of films also includes a simulation called "Brookside Manor," through

which students can become sensitized to some of the problems of the aged. Case studies presented in the Smith text should suggest ideas for teacher-made simulatuins, and for role playing situations, which may also help sensitize students to what it means to be old in America. Such activities should lead to a good deal of enthusiastic discussion, and to a close self-examination by students of both personal and societal attitudes.

5. Assign group or individual reports. Ask students to look at how past and present cultures and various nations have treated their older populations. The film "Old Age" may be effective in arousing student interest in the assignment. Perhaps some teacher-provided examples would be effective. Students are often intrigued by primitive peoples' solutions to the "aging problem."

6. Compile your own local demographic data. With highly motivated groups, probably at the eighth grade level, this experimental approach to looking at the elderly, particularly the retired, in your community can be quite effective. It is wise to utilize this approach after students have some knowledge of aging and the aged through in-class instruction, as it requires some serious dedication on the part of the participants. The procedure works as follows. Students, either on school time or on their own, are asked to visit older members of the community for an hour or so and ask them to orally respond to a special questionnaire. The class may

design their own questionnaire; it may be aimed only at gathering demographic data, or may be slanted to gain additional data for analysis. One way to approach retirement, comparing the responses of retired elders with those of non-retirees, is to develop two instruments similar to those included at the end of this unit. Form A is for retired persons; Form B for non-retired. The student may select a family member, a neighbor, or a complete stranger. The teacher may desire that he interview only one person, or several. The persons interviewed by a single interviewer need not be all of one type. The idea is that, once all interviews are complete, the student returns to the classroom and, either in small groups or individually, analyzes the data contained therein and compares it with what he has learned in class and from any outside learnings in the area. After completing the analysis of the data, students may wish to read the sections of the Smith text dealing with retirement. They should then be prepared to discuss retirement as it exists in their own community, and to perhaps offer suggestions for improving the situation.

Should you desire to utilize the questionnaires included with this unit, it will be necessary to instruct students in their use before they actually interview. Students should be told to take written notes on the answers provided by their subjects; they may also be told to note any visible non-verbal communications that accompany the verbal response. A retiree, asked if he is happily retired, may reply "yes," but in such a way as to really mean "no." Students should also assure their subjects tht data gathered is confidential and for classroom use only. Names of persons interviewed are not required by the forms. It may be worthwhile to spend some class time having students interview one another before setting out for the real thing. Physically, the two forms of the questionnaire differ. Form A, for retired persons, includes two values oriented racking exercises to gain further information on how the interviewee sees his retirement. Form B, for non-retirees, has only questions for the interviewee. Questions on both forms deal with retirement, relationships with family and friends, health, and attitudes toward retirement, past lives and life in general. Question 1 on both forms is intended to verify that the right form has been used for the interview.

The great advantage to this approach is that students become deeply involved in gathering and analyzing data, and by looking at a cross section of the older citizens in the community, are better able to relate the problems of retirement and just being "old" to their own lives. The approach demands face-to-face involvement; it is not so many words in a book. It provides the student with the specific inside story of what it is like to live in his neighborhood, and be "old."

7. Develop other values oriented materials. Ask students

to develop listings similar to the "Preference Sheets" inclused with Form A of the questionnaire. Have students ask an elderly person to complete the sheet or sheets; the results can then be analyzed to see what "old" people in the community do with their lives. Other values clarification strategies easily adaptable to the teaching of aging may be found in Values and Teaching (Columbus, Ohio: Charles E. Merrill, 1966) by Louis Raths and others, and in Values Clarification: A Handbook of Practical Strategies for Teachers and Students (New York: Hart, 1972), by Sidney B. Simon and others.

8. Ask a retiree to speak to the class about retirement. It may be effective to have more than one speaker so the class can make comparisons. After the speaker has gone, you can ask students how they feel about the description of retirement they have just heard. Would they be happy with such a later life? How can they insure that their retirements will be what they hope? Such a discussion leads nicely into the concerns of objective 5, to be discussed later.

Suggestions for Evaluation

1. Evaluation of student retention of factual material can be handled through objective testing. Specific demographic figures should not be considered as important as knowledge of trends and their implications.

2. Understanding of such areas as retirement and institutionalization in society may be assessed by asking

students to respond in writing to such questions as "What does it take for a retired person to be happy?"

OBJECTIVE 4:

Provide an understanding of aging as a lifespan process, to include:

a. The general life stages through which we age.

b. The visible biological and psychological changes resulting from the aging process.

Rationale

The question inevitably raised by students when studying aging is "What is aging, and how does it work?" An understanding of aging as a process continuing throughout life depends upon some knowledge of the stages associated with the stages. The intention, once again, at this level is not to provide an in-depth treatment of the subject, but to survey the high points. Students will have heard the terms "childhood," "adolescence," "middle age," "old age;" they may have wondered where one ends and the next begins. Many will feel that one day you are adolescent, then something magical occurs, and you are suddenly an adult. They will also have noted the gray hair, the "age spots," the wrinkles common to "old age," and they will wonder how these things happen. They will have seen bent and sickly old people on the street and asked themselves if they would eventually be that way too. Junior high school students are naturally curious; you need to provide enough of the answers to satisfy that curiosity.

Suggested Activities and Strategies

1. If you are the only teacher in your building dealing with aging, then you may find yourself compelled by student questions to cover the processes of aging, its stages and visible changes, in some depth. Smith's Aging in America overs the subject nicely, as do the other texts listed in the bibliography under "aging." An excellent source for students in Lorus Milne's The How and Why of Growing (New York: Atheneum Press, 1972), which deals with the lifetime process of maturing and also includes a good discussion of death. Whereas the texts listed in the bibliography are more technical and detailed in nature, the Milne book is designed for use at the sixth through eighth grade level. The subject can be handled well in lecture and discussion, supported by one or more films selected from the listing at the end of the unit. While this objective is most properly a science teacher's concern, if you are the students' only chance to gain this information, then a more in-depth approach may be required. In such a case, examine the science unit in this series for specific activities and strategies.

2. If a science teacher in your building is also dealing with aging, this objective is best left to him. Treat the objective, however, as another area for incidental teaching in the social studies classroom. Someone will ask the question "What is aging?", and you should be prepared to field it. A class discussion may whet appetites for learning more about

the processes of aging in science class. It is assumed that, should more than one teacher in a building be involved with aging education, those involved will coordinate their efforts closely.

Suggestions for Evaluation

Unless you actually teach formally to meet this objective in the social studies classroom, it is recommended that no attempt be made at evaluation. Should you choose to teach it formally, follow the specific recommendations included in the unit prepared for science, and evaluate as indicated in that unit.

OBJECTIVE 5:

Provide preparation for aging, to include:

a. The need for lifespan learning.
b. Planning for use of leisure time and recreation.
c. Old age as a perspective, an achievement.
d. Death as a natural phenomenon.
e. Vocabulary building

Rationale

Certainly, in giving students the knowledge and experiences inherent in objectives 1 through 4, we are preparing them for aging, but objective 5 addresses itself to building attitudes that will allow students to age gracefully, to approach middle and old age not only free from the myths of aging, but ready to live the last stages of life to their

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fullest. Smith's text offers several examples of people who reach their "golden years" only to find that they are far from golden. Retirement becomes a time of bordom, isolation, and lack of purpose. The money that seemed sufficient for retirement 30 years before suddenly is not enough. Many approach their later years with dread, and literally wait around to die.

This fifth objective is everyone's business. If either incidentally or through more formalized instruction, each teacher is able to foster in students a belief that learning throughout life is a necessity; if teachers can interest students in sports, hobbies, and activities that will last a lifetime; if teachers can convince students that old age need not be a time of sadness; if teachers can ease the fear associated with death; if teachers can give students the words to bring their thoughts about life, death and aging into the open, then those students may reach their later years prepared psychologically and physically for a life that is truly "golden."

Suggested Activities and Strategies

1. In the area of nurturing the desire for lifespan learning, formal instruction is probably best left to the science teacher, who can nicely tie the topic into instruction on changes associated with aging. Incidental teaching opportunities will likely occur during discussions of aging in the classroom, particularly if students have been exposed

to an alert and knowledgeable older volunteer or two.

2. Perhaps the best thing a social studies teacher can do to encourage planning for use of leisure time is to try to get students to realize that those elderly persons who survive best and have the happiest lives after retirement are those who early in their lives developed interests and avocations of an ageless nature. Recreational reading is one lifetime habit worth encouraging in every classroom. Specific suggestions for accomplishing this in the social studies classroom may be found in Improving Reading in Every Class (Boston: Allyn and Bacon, 1972), by Ellen Thomas and H. A. Robinson. Students who display interest in reading should be strongly encouraged to do so.

3. The social studies teacher can foster a positive attitude toward old age by pointing out how it can be viewed as an achievement, a perspective from which to view life. Smith provides several good examples of older citizens whose retirements were "golden" times of happiness, security, good health, and freedom. Those elders who plan well and heed their own accumulated wisdom seldom make the errors of youth. Old age, free from serious illness, can indeed be the best time.

4. Death is a topic that is avoided in our society. Only recently has there been an interest in the subject in the public schools. Elisabeth Kubler-Ross has called death the "final stage of life," and her well read works (two of which are

listed in the unit bibliography) treat the subject in a straightforward and positive manner. Students may be stirred to discussion by her proposition that it is death which gives meaning to our lives. Students are likely also to have a high degree of interest in Moody's Life After Life, which attempts to analyze what happens at death by presenting the statements of persons who have technically died but have revived at the last instand. Often these people tell fascinating tales of what occurred to them. All of the works listed under "death and dying" approach death as a positive thing, an integral part of life. You can easily call upon these books for supporting class sessions aimed at seeing how death is viewed by our society, and why. The Kubler-Ross texts cited also provide comparisons with other times and cultures. If you feel unsure about approaching the topic, it is suggested that you read Kubler-Ross' Death: the Final Stage of Life and Grollman's Explaining Death to Children. Insights included there should provide a variety of ideas for approaching the topic.

5. One of the results of a study by Jantz and Seefeldt at the University of Maryland (1976) on children's perceptions of age was that children who exhibit the least understanding of aging and knowledge of older people have in their vocabularies only a handful of terms referring to old age. Since vocabulary growth is commonly dependent upon breadth of experience, it is reasonable to suspect that your students might exhibit the same type of correlation between

understanding and vocabulary. Vocabulary may, therefore, serve as an indicator of a student's initial level of knowledge and experience with aging and the aged. Teachers in all subject areas should strive to provide, along with the activities and strategies cited, opportunities for increasing vocabulary. Some of the activities suggested in the Thomas and Robinson text noted above are applicable to building an aging vocabulary. Students who do not understand the terminology cannot easily grasp the subject matter of aging.

Suggestions for Evaluation

It is recommended that no formal evaluation be undertaken for this objective as a whole, since proper evaluation of success in preparing students for aging will not be possible until students actually join the ranks of the older citizen. Only a longitudinal study can ascertain how well the student was prepared. Sub-items within objective 5, however, may be evaluated through objective testing. Student comprehension of factual data about death or aging in society might be easily assessed with such tests, as could mastery of vocabulary terms.

CONCLUSION:

Although this unit is nearly ended, you are not yet ready to introduce aging education into your classroom. The unit has provided you with valid general course objectives for teaching about aging at the junior high/middle school levels.

it has suggested activities and strategies for meeting those objectives; it has recommended texts and films as resources and classroom aids. The unit has offered suggestions for evaluating your success in meeting the course objectives.

Now it is your turn. Your class is unique; your students are individuals with specific needs. Based on your knowledge of your particular teaching situation, availability of resources and materials, and the needs of your students, you should tailor this unit to your teaching needs. Pick and choose the strategies that will work in your classroom with your students. Select carefully from what is offered and arrange it to be most effective in your hands. It is up to you to structure the specific course of study, to decide on length, sequence, and the specific methods of teaching and evaluation. You should be able to set specific objectives which will result in fulfillment of the larger course objectives. The purpose of this unit has been to point the direction, to provide the starting point, and to walk down the road with you a bit. From here on, the success of aging education in your classroom depends on you.

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INSTRUCTIONS TO STUDENTS: Please circle T or F (true or false) below.

T F 1. Loss of teeth is a result of old age.

T F 2. The older you get, the harder it is to learn new things.

T F 3. Intelligence decreases as you get older.

T F 4. Old people are always sick.

T F 5. Old people cannot remember anything.

T F 6. Old people and young people have nothing in common.

T F 7. All people age at the same rate.

T F 8. Old people rarely bother to vote.

T F 9. You are "old" at age 65.

T F 10. You go "downhill fast" after age 65.

(KEY: All items are false)

RETIREMENT QUESTIONNAIRE

FORM A (Retired): ☑

FORM B (Still Employed): ☐

TO THE STUDENT

This questionnaire is designed to gather basic information on persons of approximate retirement age who are either retired (Form A) or soon to be retired (Form B). You should use the appropriate form for the present status of the person you are interviewing. Information gained from your interview should be CONFIDENTIAL, and should be used for classroom **analysis** ONLY.

FORM A

1. Are you retired?
2. When were you born?
3. Are you married?
4. If no longer any (husband/wife), how long apart?
5. Who else lives with you?
6. How many children do you have living?
7. How often do you see them?
8. How many relatives (other than children) do you see at least once per once?
9. How many close friends with whom you could discuss personal problems live here in town?
10. How many close friends are work acquaintances?
11. How often do you see the friend you see most often?
12. How often do you worry about your family?
    (a) often (b) sometimes (c) hardly ever
13. Do you consider yourself:
    (a) elderly (b) middle aged (c) late middle aged (d) old
14. What did you do for a living before you retired?
15. How long were you there?
16. Is your present income adequate?
17. Did you really plan for retirement?
18. How?
19. What was the retirement age at your company?
20. How long have you been retired?
21. Did you want to retire?
22. Is retirement good or bad for a person?

23. Should a person retire all at once or gradually?
24. What did you plan to do after retirement?
25. Are you doing it?
26. At what age does a man do his best work?
27. What did you like best about your job?
28. How is your present health?
29. Have you seen a doctor within a year?
30. Do you worry about your health?
31. Are you happy?
32. How would you make your life happier?
33. Are you more or less religious than you used to be?
34. How often do you daydream about the past?
35. Are you more absent minded than you used to be?
36. How often do you feel depresses?
37. How often do you think of dying?
38. Does your life today serve a purpose?
39. Do you wish you were younger?
40. Is retirement what you expected?
41. Are you used to retirement?
42. Are you looking for work?
43. How has your standard of living changed since retirement?
44. Does the government do enough for retirees?
45. Would you like to go to a "home" when you can no longer care for yourself?

PREFERENCE SHEET I

How often do you:	OFTEN	SOMETIMES	NEVER/RARELY
a. see your children			
b. see your grandchildren			
c. go visiting			
d. attend church			
e. go to club, lodge, or union meetings			
f. attend sporting events			
g. read			
h. listen to radio			
i. watch television			
j. work in yard or garden			
k. go to movies			
l. talk with friends			
m. take walks alone			
n. play cards or similar games			
o. take rides out in the country			
p. eat out			

Of the "oftens," rank your top three choices:

1.

2.

3.

PREFERENCE SHEET II

How often do you:	OFTEN	SOMETIMES	NEVER/RARELY
a. feel loss of self respect			
b. worry about health			
c. feel you deserve a rest			
d. miss your job			
e. feel bored			
f. see no purpose in life			
g. worry about future			
h. wish you had a hobby			
i. worry about money			
j. wish to live life over			

Of the "oftens," rank your top three choices:

1.

2.

3.

RETIREMENT QUESTIONNAIRE

FORM A (Retired): ☐

FORM B (Still Employed): ☑

TO THE STUDENT

This questionnaire is designed to gather basic information on persons of approximate retirement age who are either retired (Form A) or soon to be retired (Form B). You should use the appropriate form for the present status of the person you are interviewing. Information gained from your interview should be CONFIDENTIAL, and should be used for classroom analysis ONLY.

FORM B

1. Are you retired?
2. Where were you born?
3. Are you married?
4. If no longer any (husband/wife), how long apart?
5. Who else lives with you?
6. How many living children do you have?
7. How often do you see them?
8. How many relatives (other than children) do you see at least once per week?
9. How many close friends with whom you could discuss personal problems live here in town?
10. How many close friends are work acquaintances?
11. How often do you see the friend you see most often?
12. How often do you worry about your family?
    (a) often (b) sometimes (c) hardly ever
13. Do you consider yourself:
    (a) elderly (b) middle aged (c) late middle aged (d) old
14. What do you do for a living?
15. How long have you been there?
16. Do you enjoy your job?
17. Is your present income adequate?
18. What income will you need after retirement?
19. How much do you really know about your company's retirement plan?
20. Are you planning for retirement?
21. How?
22. What is the retirement age for your company?
23. Do you want to retire?

24. Is retirement good or bad for a person?
25. Should a person retire all at once or gradually?
26. What do you plan to do after retirement?
27. At what age does a man do his best work?
28. How is your present health?
29. Have you seen a doctor within a year?
30. Do you worry about your health?
31. Are you happy?
32. How would you make life happier?
33. Are you more religious now than you used to be?
34. How often do you daydream about the past?
35. Are you more absent minded than you used to be?
36. How often do you feel depressed?
37. Do you often think of dying?
38. Do you feel your life serves a useful purpose?
39. Do you wish you were younger?
40. What do you expect of retirement?
41. Do you expect your standard of living to change after retirement?
42. Would you like to go to a "home" when you can no longer care for yourself?
43. Does the government do enough for the retirees?

AGING EDUCATION
FOR
THE SCIENCE CLASSROOM:
JUNIOR HIGH/MIDDLE SCHOOL

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INTRODUCTION:

Why should you want to teach about aging and the aged in your classroom? Why should you continue examining this unit? There are many reasons.

1. Everyone ages; it is a continuing life span process. Yet most Americans are ignorant as to what aging is; they commonly accept a mythology of aging which paints the aging process as something to be feared. Aging education can disprove the myths.

2. Most Americans fear aging and, particularly, "old age." People see growing older as a path to death; old age is the time during which one waits to die. It is often a time of illness, economic insecurity, and depression. Aging education can ease the fear.

3. Children, as young as pre-school, note differences in adults of differing ages. By the time a student reaches your classroom, he has had six to seven years exposure to the myths of aging. The older he gets, the more he will think about aging, the more his fears will grow. Negative attitudes, and resultant behavior toward older persons, begin to form early. Studies of children's perceptions of age (Hickey and Kalish, 1968; Hickey, Hickey, and Kalish, 1968; Jantz and Seefeldt, 1976) document the gradual formation of these negative attitudes and beliefs.

4. Research indicates that you can effectively alter these attitudes in your classroom. Studies like that by

Baltes and Labouvie-Vief (1976) show what can be accomplished in only a short period of time with standard types of classroom materials. Other programs, which have utilized "intergenerational relationships," social interaction between young and old, have achieved phenomenal success in relatively short periods of time.

5. Students react positively and enthusiastically to aging education. Student responses to programs like the Teaching-Learning Communities (T-LC) program in Ann Arbor, which brings older citizens into art classes to teach skills such as lace making, have been excellent (Mehta, 1976). Reactions to other intergenerational programs across the nation have ranged from good to outstanding.

6. Students exhibit a high degree of interest in aging and the aged, once they get into the subject. Knowledge about aging provides answers to questions they may have about their own aging, and that of their parents, grandparents, and friends. Students perceive the subject as very relevant to life as they are living it.

7. Bureau of the Census projections indicate that, by the year 2000, one out of every five persons living will be over 65 years of age. Your students will likely find themselves in the 21st Century, part of a society that caters to the older citizen, in much the same way as today's society emphasizes youthful interests. What a sad situation it may be, if a majority of those elders accept the negative myths of aging,

and are unaware of the facts. "Old" people, like students in the classroom, tend to live up to our expectations of them.

OBJECTIVES:

In late 1976, a group of leaders in the development of aging curriculum materials for the public school were polled to determine the areas within the broad field of aging that should be part of a K-12 curriculum on aging in the public school. From the consensus of opinion of these experts evolved a K-12 listing of objectives for public school aging curricula. The researcher categorized the objectives by grade level. The objectives defined for the junior high/ middle school level are as follow:

1. Provide opportunities for the establishment of intergenerational relationships.

2. Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

    a. Examination of aging stereotypes.
    b. Examination of common myths of aging.

3. Provide a profile of the aged in America, past, present and future, to include:

    a. Demographic data to support trends.
    b. Comparison with other times and cultures.
    c. Retirement in America.
    d. Institutionalization in America.

4. Provide an understanding of aging as a lifespan process, to include:
    - a. The general life stages through which we age.
    - b. The visible biological and psychological changes resulting from the aging process.

5. Provide preparation for aging, to include:
    - a. The need for lifespan learning.
    - b. Planning for use of leisure time and recreation.
    - c. Old age as a perspective, an achievement.
    - d. Death as a natural phenomenon.
    - e. Vocabulary building.

PROCEDURES: ORGANIZATION AND EVALUATION:

Any unit on aging, then, should strive to meet these five objectives, or as many of them as seem appropriate to the given subject area. Objectives 1 and 2 are felt to be appropriate to all subject areas. Objective 3 seems to mesh well with the social studies; objective 4 with science. Parts of objective 5 seem best suited to physical education. This is not to say that a given objective should lie in a certain subject area exclusively, nor that the meeting of all the ovjectives and sub-items is necessary. The purpose of aging education at Junior High/Middle School levels should e to introduce some formal instruction on aging and the aged. The instruction should not be in-depth, but should hit high points, those likely to interest the student and seem most relevant to his life. The period of formal instruction, however, should not be the major emphasis at levels below eighth grade. Formalized classroom instruction may be as brief as one or two weeks in length, or it may be spaced over the period of the school year.

By far the most important part of any aging curriculum is the use of intergenerational experiences, and the incidental activities which cause the student to stop and re-examine his attitudes and beliefs. The facts he learns in a lecture or as part of a research project will definitely affect his attitudes toward aging and the aged, but, in order to achieve long lasting behavioral changes, the student must experience contact with adults at various stages of age. One does not learn to swim by reading a book about it; one must get into the water and experience it. Likewise, cognitive learning of the factual matter of aging is insufficient. Intergenerational relationships are the key to effective aging curricula. Experiences with older persons, coupled with a good basic factual knowledge, should result in long lasting attitudinal change. Generally speaking, a year's instruction in aging might be structured as follows. Students might be pre-tested at the beginning of the school year to determine how accurate their knowledge of aging and the aged is. They should also be told that a number of intergenerational experiences have been planned: tutors, guest speakers, field trips, and so forth. Throughout the year, you can teach incidentally as opportunities present themselves. Should a student comment on how dynamic a certain elderly teacher's aide is, the time may be right for a class discussion about stereotypes. Values clarification type activities aimed at aging and the aged might also be used for variety. A formal period of instruction might be presented after eight or nine weeks of class. Prior to the instruction, students should be tested again with the same instrument as before (normally a true or false test reflecting common aging myths) and the results compared. Some scores should improve simply through the effects of having older persons in the classroom. After the periof of formal instruction is completed, students should again be tested with the instrument, or a variant form, to determine what learning has accrued as a result of that instruction. Based on these results, and class interest, you may choose to explore some area of aging in more depth, or may continue throughout the balance of the year with incidental teaching and intergenerational experiences. At the end of the school year, students might be tested once more for retention of what they learned during the formal classroom period and in their relationships with elders.

TEACHING THE UNIT:

The remainder of this unit is concerned with specific suggestions for activities and methods for meeting the five objectives in your particular subject area. Materials are arranged as follows:

1. A statement of the objective.

2. A brief rationale for the objective.
3. Suggested activities and strategies.
4. Suggestions for evaluation.

Included also is a sample evaluation instrument, a listing of recommended films, and a bibliography aimed at the junior high/middle school level. Films and references are categorized for easy match with objectives.

OBJECTIVE 1:

Provide opportunities for the establishment of intergenerational relationships.

Rationale

Analysis of the results of programs which rely heavily on the effects of intergenrational experiences suggests that they key to successful aging education is exposure of the young to situations in which they may come to know an "old" person on a one-to-one basis. Such nationwide programs as the Generations Alliance Program of the American Association of Retired Persons, the Hand-in-Hand Cross Age Interactions Project of the Girl Scouts of America, and the Youth Conferences on Older Americans initiated by the National Retired Teachers Association have reported phenomenal success in changing attitudes of the young toward aging and the aged.

Suggested Activities and Strategies

1. Bring older adults into the classroom. In many schools across the nation, retirees and other older citizens volunteer

to serve in the schools in a variety of ways. In New York, Los Angeles, and Miami, elders serve as tutors in the public schools, with surprising results. The greater patience of many older tutors makes them ideal for working with slow learners; the tutors find that their volunteering meets a real personal need. In the schools of Ann Arbor, Michigan, older citizens are guest teachers in art classes, teaching such skills as lace making. Consider the value of having a local scientist come into your classroom to talk about his life's work. Indeed there are probably retired biologists, chemists, or physicists living in your own community who would be delighted to speak to your classes. Retired public school and university faculty may also make excellent speakers. Older volunteers may also serve as laboratory assistants or as teacher's aides, with duties ranging from tutoring, through preparation of teaching or laboratory materials, to clerical duties. In cases where school-wide or district-wide volunteer programs are undertaken, funding may be available. In the Ann Arbor program, the Retired Senior Volunteer Program (RSVP) supplies lunches and transportation for participating volunteers. For complete information on setting up funded volunteer programs, contact the National School Volunteer Program, Inc., 300 North Washington Street, Alexandria, Virginia, 22314. For the individual teacher, however, the best way to begin is to contact local community service groups, "Golden-Age" clubs, and the like in search of leads. A small advertisement in a local newspaper might produce more willing volunteers than you could use. Often, older people in our society sit home not knowing how to become involved with the mainstream of life. Many would jump at the opportunity to be of service. Be sure, to screen applicants carefully; avoid selecting persons who typify the stereotypes and myths that you are trying to counter.

2. Take students into the community. Ask students to conduct community inventories of the aged. Ask them to interview older neighbors. With a bit of prior coordination, visits by students to retirement communities or rest homes can be arranged. Be cautious in arringing visits to nursing homes, since such trips can prove depressing to adolescents. As part of a study of institutionalization, with proper preparation, such a visit would be appropriate.

3. Take a mixed group of young and old on a field trip. Ask your students to undertake a community service project in partnership with a local "Golden-Age" club, garden club, or a similar organization. During the summer of 1976, the San Francisco Bay area Girl Scout Council sponsored a group of teenagers and older citizens on a field trip to trace the route followed by Lewis and Clark. Certainly, in any geographic area, there are attractions of scientific significance worthy of a field trip. Park and wilderness areas lend themselves to field experiences dealing with biology, botany, geology and ecological concerns. Laboratory tours offered by industry are often worthwhile. A trip to a museum of science or natural history can be an excellent way to begin.

Suggestions for Evaluation

1. Pre-test and post-test. If you pre-test students as to their factual knowledge about the aged at the beginning of the year, and test with a similar instrument prior to formal classroom instruction on aging, successful intergenerational relationships may be identified. Relationships of a meaningful nature cannot be forced; they take time to develop. You can only provide opportunities for positive relationships to form. If indeed such relationships do develop, then it is logical to assume that student attitudes will change somewhat, and that some of the truths about aging and the aged will be gained through the social inter-action of the two persons involved.

2. Teacher observation. You might keep a log, charting the progress of intergenerational relationships. If older persons are coming into the classroom on a regular basis, it should be easy to note changes in student behavior over a period of time.

3. Values sheets. Students may be asked to complete a series of open-ended sentences about old people prior to introducing intergenerational activities, and again prior to formal aging instruction. A positive change in attitudes reflected on the sheets may indicate a successful relationship between the two parties involved.

4. Talk to the student. Ask the student how his attitudes have changed since the introduction of intergenerational

activities. If he can see no change, then chances are a close relationship has not developed.

OVJECTIVE 2:

Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

a. Examination of aging stereotypes.

b. Examination of common myths of aging.

Rationale

Even though examination of personal and societal attitudes should result as intergenerational relationships develop, it is not enough to rely on chance. Since the common stereotypes and myths of aging are accepted as truth by most students, one of the most effective strategies for teaching about aging is to challenge those stereotypes directly. A student who has always believed that "you can't teach an old dog new tricks" is often motivated to learn more when he finds out that the statement is not true of his grandparents. He may also be startled to learn that age has nothing whatsoever to do with loss of teeth. Such revelations are motivating; the student begins to question, and seek the truth.

Suggested Activities and Strategies

1. Class discussions. Capitalize on moments of opportunity. If a student comments on old people in general, or on an older person in particular, steer the class into a discussion of stereotypes and myths about aging and the aged.

An excellent text for teacher or student use is Bert K. Smith's Aging in America (Boston: Beacon Press, 1973), available in paperback for about $4.00. It is well written, giving a clear presentation of aging and the problems of the aging in America. The text also does a fine job of covering stereotypes and myths commonly associated with aging. Often such discussions generate interest in becomeing more deeply involved with aging education in the classroom.

2. Ask students, perhaps for extra credit, to read biographies of men and women who were creative and productive well into their final years. Many leading figures in science made important contributions while in their later years. Researchers like Pasteur, who discovered at age 64 that microbes cause disease, are not rare in the sciences. When students have completed their reading, ask them how the scientists about whom they have read fit the mold for "old" people. Students, raised with the belief that IQ decreases as one "goes downhill" into old age, may be astounded to learn that their grandparents may well be as capable of learning new things as they themselves. There is no evidence to support a decline in IQ being related to the aging process, although there are some indications that learning patterns change somewhat as one grows old. Ask your students to consider the implications of these facts of aging in their own lives. Typically, we treat our elders as if their mental powers have declined; ask your class how they treat their

grandparents and elderly acquaintances. Used in such a manner, biographies can lead to a lively class discussion; the student is forced to examine his own attitudes and behaviors toward the elderly. Should you desire to preface this assignment with class discussion of stereotypes and a few of the myths and realities of aging, the unit bibliography lists several good references under "stereotypes."

3. Show a film that will spur discussion. The two films listed at the end of the unit under "dynamic elders" are both good introductor vehicles. Both are likely to lead to a good discussion of stereotypes and myths of aging. "Don't Stop the Music" is probably the most effective for meeting objective 2, with its side-by-side portraits of older Americans who speak for themselves. Some of the subjects typify the stereotypes; others are rugged individualists, alert and full of life. The film provides the student with a variety of "old" people, and challenges the myths and stereotypes. Since the film runs only 18 minutes, there will be sufficient time for a good introductory discussion.

Suggestions for Evaluation

1. Attitudinal evaluation. Changes in attitudes might be noted by applying the evaluation techniques cited for objective 1: pre-testing and post-testing, the use of value sheets, and talking with students.

2. Cognitive evaluation. Knowledge of stereotypes and myths of aging can be measured through the use of objective

tests. The measurement instrument suggested for objective 1 would effectively assess student retention of factual data. Essay tests might also be used to evaluate student understanding and knowledge. Students might, for example, be asked to create in writing a fictitious elder who reflects the truths of aging, as opposed to the stereotypes and myths.

OBJECTIVE 3:

Provide a profile of the aged in America, past, present and future, to include:

a. Demographic data to support trends.
b. Comparison with other times and cultures.
c. Retirement in America.
d. Institutionalization in America.

Rationale

In order to understand what it is to grow~~n~~ old in America, students need some basic data. It is not enough to point out that myths about aging and the aged abound in our society. Students are likely to want to learn how and why these myths developed. If the old are maligned now, what about in the future, when their parents, or they themselves are old? They may ask about the results of these myths and stereotypes on the aged in society, and wonder about retirement and institutionalization, in view of the truths they may have learned. An in-depth profile is not necessary at junior high/middle school levels; it is sufficient to survey the high points and examine areas likely to be of interest to young adolescents.

Suggested Activities and Strategies

1. If you are the only teacher in your building dealing with aging, then you may wish to provide a brief profile. If student interest so dictates, you may wish to further investigate areas included within this objective. In either case, a fine source of information is the previously mentioned Smith text. Brief profiles of the aged in America can be handled well in lecture and discussion sessions, especially when supported by one or more films and other resources listed at the end of this unit. While the content covered under this objective is most properly a social studies concern, if you are your students' only chance to learn about aging and the aged, then you may want to invest time in objectives other than 1, 2 and 4. Should you decide to do so, check the other units in this series for specific teaching recommendations. Other units have been prepared in the areas of English, physical education, mathematics, and the social studies at the seventh and eighth grade levels.

2. If a social studies teacher is teaching about aging also, or if you do not desire to spend time on all the objectives, then limit yourself to 1, 2 and 4 as a minimum and leave profile information to your colleague. Treat this area of aging education as one for incidental teaching in the science classroom. Should students express a desire for demographic information, be prepared to lead a discussion in general terms, but coordinate with your social studies

colleague to insure that a somewhat more detailed approach to the subject occurs within his course of study. It is assumed that, if other teachers are involved in the teaching of aging, a high degree of planning and coordination will occur, perhaps even some teaming.

Suggestions for Evaluation

Unless you formally teach to meet this objective in your science classes, it is recommended that no attempt be made at evaluation. Should you choose to teach it, follow the recommendations included in the unit prepared for the social studies, and evaluate according to the recommendations included therein.

OBJECTIVE 4:

Provide an understanding of aging as a lifespan process, to include:

a. The general life stages through which we age.

b. The visible biological and psychological changes resulting from the aging process.

Rationale

The question inevitably raised by students when studying aging is "What *is* aging, and how does it work?" An understanding of aging as a process continuing throughout life depends upon some knowledge of the "stages" through which we age, and the common biological and psychological changes associated with those stages. The intention, once again, at junior high/middle school levels, is not to provide a detailed treatment, but to survey the high points. Students will have heard the terms "childhood," "adolescence," "middle age," "old age;" they have wondered where one stage ends and the next begins. Many will feel that one day you are an adolescent, then something magical occurs, and you are suddenly an adult. They may wonder at what age a person should be considered "old." Students will have noted the gray hair, the "age spots," the wrinkles common to "old age," and they will wonder how those things happen. They will have seen bent and sickly old people on the street, and asked themselves if they will eventually be that way too. Your students are naturally curious; you need to provide enough of the answers to satisfy that curiosity.

Suggested Activities and Strategies

1. Use Smith's Aging in America as the class text. This fine text surveys virtually all areas dealt with in aging education, including the aging process and the changes associated with it. If copies are not available for the student, it can serve as an excellent source to support teacher-led lecture and discussion sessions. If sufficient copies are available, students will enjoy the author's approach to the subject and her readable style. It would be helpful to students if you pre-teach, perhaps chapter by chapter, the new vocabulary words that they are likely to encounter. For your use, more detailed and technical resources are listed

in the unit bibliography. With the exception of David and Doris Jonas' Young Till We Die, the works listed are beyond the capability of most junior high/middle school students.

2. Limit the concepts you teach. When one looks at the scientific aspects of aging, the biological and psychological changes that occur, it soon becomes evident that any real in-depth treatment would be quite impossible. The detailed operations of the aging process are too complex for junior high/middle school students. Without a firm background in gerontology, one quickly becomes lost. For your students, it is best to try to keep it simple. Stress the visible changes of aging, the things they will have noted happening to their parents and grandparents. Make it clear which changes are age related, and which are not. Loss of teeth, for example, is commonly associated with the aging process, when in fact man loses his teeth to poor care and improper diet. In looking at "stages," stress two concepts: 1) aging is a continuous process affecting us from birth to death, and 2) aging proceeds at different rates in different people. If students comprehend nothing else, they will see the folly of labeling someone "old" simply because he has live a certain number of years. The student should be led to see the "stages" of life as somewhat arbitrary classifications, not necessarily based on changes in the aging process, but often tied to parameters set by our society. The idea that "old age" begins at 65 is only one example.

3. Support instruction with a film. "The Mystery of Aging (Parts 1 and 2)" gives fairly comprehensive coverage of the biological, psychological, and societal aspects of aging. Since the film may be a bit advanced, especially below the eighth grade level, it is recommended that students have familiarity with the aging process, a few basic concepts, prior to viewing. Still, students are likely to have questions for you at the end of the film. While the film is somewhat difficult for some students at this level, it is also excellent viewing. Also listed with the "Films and Film Sources" at the end of this unit is the film "Aging." Part of the Developmental Psychology Series, it effectively illustrates three common aging patterns. It complements "The Mystery of Aging" by illustrating the effects of the various processes of aging on man's relationship with society.

Suggestions for Evaluation

1. Evaluation of conceptual learning can easily be accomplished by objective testing. A short true-false test, listing concepts associated with the aging process should work well. Keep in mind that a high degree of knowledge of the aging process is not desired at this level. Also, gerontology is a relatively young science and there appear to be individual exceptions to almost all the generalizations we might care to make about aging. Much of what appears to be "fact," may yet be open to dispute.

OBJECTIVE 5:

Provide preparation for aging, to include:

- a. The need for lifespan learning.
- b. Planning for use of leisure time and recreation.
- c. Old age as a perspective, an achievement.
- d. Death as a natural phenomenon.
- e. Vocabulary building.

Rationale

Certainly, in giving students the knowledge and experiences inherent in objectives 1 through 4, we are preparing them for aging, but objective 5 addresses itself to building attitudes that will allow students to age gracefully, to approach middle and old age not only free from the myths of aging, but ready to live the last stages of life to their fullest. Smith's text offers several examples of people who reach their "golden years" only to find that they are far from golden. Retirement becomes a time of boredom, isolation, and lack of purpose. The money that seemed 30 years before sufficient for retirement is suddenly not enough. Many approach their later years with dread, and literally wait around to die.

This fifth objective is everyone's business. If either incidentally or through more formalized instruction, each teacher is able to foster in students a belief that learning throughout life is a necessity; if teachers can interest students in sports, hobbies, and activities that will last a lifetime; if teachers can convince students that old age need not be a time of sadness; if teachers can ease the fear associated with death; if teachers can give students the words to bring their thoughts about life, death, and aging into the open, then those students may reach their later years prepared psychologically and physically for a life that is truly "golden."

Suggested Activities and Strategies

1. As you point out that IQ does not decline sharply as aging progresses, and that the ability to learn does not necessarily diminish, stress the need for lifespan learning. Throughout the year, incidentally reinforce the idea that we continually learn as we go through life, and point out that survival in a rapidly changing society requires that we continue to learn. Stress that learning has value in itself; it need not be something one does to pass a test, get a grade, or qualify for a job. In science class, the need for lifespan learning ties easily into discussions of aging myths and the aging process. Students exposed to one or two alert myths and knowledgeable older volunteers will soon note the part that lifespan learning plays in their lives. You may wish to ask a dynamic elder to speak to the class on his attitudes toward learning and its role in later life. An interesting discussion should result.

2. Perhaps the best thing any teacher can do to encourage

planning for use of leisure time is to try to get students to realize that those elderly persons who survive best and have the happiest lives after retirement are those who early in their lives developed interests and avocations of an ageless nature. You can capitalize on chance opportunities to encourage students to pursue such interests. Recreational reading is one lifetime habit worth encouraging in every classroom. Specific suggestions for accomplishing this in the science classroom may be found in Improving Reading in Every Class, by Ellen Thomas and H. A. Robinson (Boston: Allyn and Bacon, 1972). Students who show the slightest interest in reading when they are not required to should be strongly encouraged to continue.

3. The science teacher can foster a positive attitude toward old age by pointing out how it can be viewed as an achievement, a perspective from which to view life. Smith provides several good examples of older citizens whose retirements were "golden" times of happiness, security, good health, and freedom. Those elders who plan well and heed their own accumulated wisdom seldom make the errors of youth. Old age, free from serious illness, can indeed be the best time.

4. Death is a topic that has been avoided in our society. Only recently has there been an interest in the subject in the public school. Death is probably best approached from the social studies area at the junior high/middle school level, where students can examine societal attitudes toward death and dying. It is probably unwise to discuss the biological

changes associated with the phenomenon. If you are the only teacher dealing with the subject, however, the texts cited in the unit bibliography offer positive approaches to the topic. The two books by Elizabeth Kubler-Ross treat death as a "final stage of life." Students may be stirred to lively discussion by her proposition that it is death that provides real meaning for life. Moody's Life After Life, which attempts to analyze what occurs at death by presenting the cases of persons who have died technically, but have been revived at the last instant, will be of high interest to students. The similarities in the fascinating tales told by these people will make both student and teacher stop and think about our outlook on death and dying. Your overall goal should be to lead students to view death as a natural and integral part of life, common to all forms of life. If you feel unsure about how to approach the topic, it is suggested that you read Kubler-Ross' Death: the Final Stage of Life and Grollman's Explaining Death to Children. Insights included there should provide a variety of ideas for approaching the topic.

5. One of the results of a study by Jantz and Seefeldt at the University of Maryland (1976) on children's perceptions of age was that children who exhibit the least understanding of aging and knowledge of older people have in their vocabularies only a handful of terms referring to old age. Since vocabulary growth is commonly dependent upon breadth of

experience, it is reasonable to suspect that your students might exhibit the same type of correlation between understanding and vocabulary. Vocabulary may therefore serve as an indicator of a student's initial level of knowledge and experience with aging and the aged. The science teacher has the responsibility to teach students some of the basic terminology of aging. If students are to do any reading on their own about the aging process, they will need to enlarge their vocabularies. Some of the activities suggested by the Thomas and Robinson text noted above are applicable to building an aging vocabulary. Students who do not understand the terminology cannot easily grasp the subject matter of aging.

Suggestions for Evaluation

It is recommended that no formal evaluation be undertaken for this objective overall, since proper evaluation of success in preparing students for aging will not be possible until students actually join the ranks of the older citizen. Only a longitudinal study can ascertain how well the student was prepared. Sub-items under objective 5, however, may be evaluated through objective means. Student comprehension of factual data on death and student mastery of aging terms might easily be assessed by such testing.

CONCLUSION:

Although this unit is nearly ended, you are not yet ready to introduce aging education into your classroom. The unit has provided you with valid general course objectives for teaching about aging at the junior high/middle school level. It has suggested activities and strategies for meeting these objectives; it has recommended texts and films as resources and classroom aids. The unit has offered suggestions for evaluating your success in meeting the course objectives.

Now it is your turn. You class is unique; your students are individuals with specific needs. Based on your knowledge of your particular teaching situation, availability of resources and materials, and the needs of your students, you should tailor this unit to your teaching needs. Pick and choose the strategies that will work in your classroom with your students. Select carefully from what is offered and arrange it to be most effective in your hands. It is up to you to structure the specific course of study, to decide on length, sequence, and the specific methods of teaching and evaluation. You should be able to set specific objectives which will result in fulfillment of the larger course objectives. The purpose of this unit has been to point the direction, to provide the starting point, and to walk down the road with you a bit. From here on, the success of aging education in your classroom depends on you.

SAMPLE EVALUATION INSTRUMENT

INSTRUCTION TO STUDENTS: Please circle T or F (true or false) below.

T F 1. Loss of teeth is a result of old age.

T F 2. The older you get, the harder it is to learn new things.

T F 3. Intelligence decreases as you get older.

T F 4. Old people are always sick.

T F 5. Old people cannot remember anything.

T F 6. Old people and young people have nothing in common.

T F 7. All people age at the same rate.

T F 8. Old people rarely bother to vote.

T F 9. You are "old" at age 65.

T F 10. You go "downhill fast" after age 65.

(KEY: All items are false)

AGING EDUCATION
FOR
THE MATHEMATICS CLASSROOM:
JUNIOR HIGH/MIDDLE SCHOOL

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INTRODUCTION:

Why should you, a teacher of mathematics, want to teach about aging and the aged? Why should you even continue examining this teaching unit? There are many good reasons.

1. Everyone ages; it is continuous lifespan process. Yet most Americans are ignorant as to what aging is; they commonly accept a mythology of aging which paints the aging process as something to be feared. Aging education can disprove the myths.

2. Most Americans fear aging and, particularly, "old age." People see growing older as a path to death; old age is the time during which one waits to die. It is often a time of illness, economic insecurity and depression. Aging education can ease the fear.

3. Children, as young as pre-school, note differences in adults of differing ages. By the time a student reaches your classroom, he has been exposed to six or seven years of the myths of aging. The older he gets, the more he will think about growing old, the more his fears will grow. Negative attitudes, and resultant behavior toward older persons, begin to form early. Studies of children's perceptions of age (Hickey and Kalish, 1968; Hickey, Hickey, and Kalish, 1968; Jantz and Seefeldt, 1976) document the gradual formation of these negative attitudes and beliefs.

4. Research indicated that you can effectively alter these attitudes in your classroom. Studies like that by Baltes

and Labouvie-Vief (1976) show what can be accomplished in only a short period of time with standard types of classroom materials. Other programs, which have utilized "intergenerational relationships," social interaction between young and old, have achieved phenomenal success in relatively short periods of time.

5. Students react positively and enthusiastically to aging education. Student responses to programs like the Teaching-Learning Communities (T-LC) program in Ann Arbor, which brings older citizens, called "Grandpersons," into art classes to teach such skills as lace making, have been excellent (mehta, 1976). Reactions to other intergenerational programs across the nation have ranged from good to outstanding.

6. Students exhibit a high degree of interest in aging and the aged, once they get into the subject. Knowledge about aging provides answers to questions they may have about their own aging, and that of their parents, grandparents, and friends. Students perceive the subject as very relevant to life as they are living it.

7. Bureau of the Census projections indicate that, by the year 2000, one out of every five persons living will be over 65 years of age. Your students will likely find themselves in the 21st Century, part of a society that caters to the older citizen, in much the same way as today's society emphasizes youthful interests. What a sad situation it might

be, if a majority of those elders accept the negative myths of aging, and are unaware of the facts. "Old" people, like students in the classroom, tend to live up to our expectations of them.

OBJECTIVES:

In late 1976 a group of leaders in the development of aging curriculum mateials for the public school were polled to determine the areas within the broad field of aging that should be part of a K-12 curriculum on aging in a public school. From the consensus of opinion of these experts evolved a K-12 listing of objectives for public school aging curricula. The researcer categorized the objectives by grade level. The objectives defined for the junior high/middle school level are as follow:

1. Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:
    a. Examination of aging stereotypes.
    b. Examination of common myths of aging.
2. Provide opportunities for the establishment of intergenerational relationships.
3. **Provide** a profile of the aged in America, past, present, and future, to include:
    a. Demographic data to support trends.
    b. Comparison with other times and cultures.
    c. Retirement in America.
    d. Institutionalization in America.

4. Provide an understanding of aging as a lifespan process, to include:

   a. The general life stages through which we age.

   b. The visible biological and psychological changes resulting from the aging process.

5. Provide preparation for aging, to include:

   a. The need for lifespan learning.

   b. Planning for use of leisure time and recreation.

   c. Old age as a perspective, an achievement.

   d. Death as a natural phenomenon.

   e. Vocabulary building.

PROCEDURES: ORGANIZATION AND EVALUATION:

Any unit on aging, then, should strive to meet these five objectives, or as many as seem appropriate to a given subject area. Objectives 1 and 2 are felt to be applicable to all subject areas. Objective 3 seems well suited to the social studies; objective 4 to the sciences. Parts of objective 5 are suited to almost every area. Where then, you may ask, does mathematics fit in? Unless the mathematics teacher is the only teacher in the building dealing with the subject of aging, and has a strong desire to teach a mini-unit on the subject, it is recommended that he concern himself only with objectives 1, 2, and 5. If, after reading this unit, you believe that aging education should occur in other classes at the junior high/middle school levels, then why not approach your colleagues in social studies, science and English and urge them to consider becoming involved? As part of this series, there are teaching units designed to show them how to approach the subject in each of their areas. Ask them to examine the materials and decide for themselves. Normally, meeting the objectives for mathematics does not involve any formal classroom teaching, nor does it call for any type of evaluation other than teacher observation. The major purpose of aging education in the mathematics classroom is to expose students to intergenerational experiences, and to capitalize on incidental teaching opportunities which may cause the student to pause and re-examine his attitudes and beliefs. Facts learned from lectures would definitely affect student attitudes toward aging and the aged, but, in order to achieve long lasting behavioral and attitudinal changes, the students must experience contact with adults at various stages of adulthood. One does not learn to ride a bicycle by reading a book about it; one gets on and pedals. Likewise, cognitive learning of the factual matter of aging is insufficient. Intergenerational relationships are the key to effective aging curricula. Experiences with older persons, coupled with basic factual knowledge, should result in long lasting attitudinal changes. Generally speaking, your involvement with aging education might be structured as follows. Before the school year begins, examine your textbooks to see if older persons portrayed in them reflect truths about the aged, or are they all stereotypes with canes, bent spines, and exaggerated wrinkles. Try to purchase in the future texts which do not reinforce aging stereotypes. If you are currently forced to use them, you might compensate by pointing out, when you first take your students through the text at the beginning of the year, that the book does not accurately portray the people pictured therein. During the first week of class, students should be told that, during the year, a number of intergenerational experiences are in store, in the form of older volunteers serving as teacher's aides, tutors and guest speakers. As the year progresses, you will find opportunities to teach about aging incidentally. Should a student comment on how alert a certain tutor is for a man of 67, you may find that the time is right for a short class discussion about stereotypes.

TEACHING THE UNIT:

The remainder of this unit is concerned with specific suggestions for integrating aging education into the mathematics classroom, by meeting objectives 1, 2 and parts of objective 5. Materials will be arranged as follows:

1. A statement of the objective.
2. A brief rationale for the objective.
3. Suggested activities and strategies.

Included also is a listing of recommended films and a bibliography of references aimed at the junior high/middle school level. Should you desire more involvement in your classroom with aging education, these sources will prove valuable. Additional strategies and activities for meeting all five objectives may be found in other units in this series.

OBJECTIVE 1:

Provide opportunities for the establishment of intergenerational relationships.

Rationale

Analysis of the results of programs which rely heavily on the effects of intergenerational experiences suggests that the key to successful aging education is exposure of the young to situations in which they may come to know an "old" person on a one-to-one basis. Such nationwide programs as the Generations Alliance Program of the American Association of Retired Persons, the Hand-in-Hand Cross Age Interactions Project of the Girl Scouts of America, and the Youth Conferences on Older Americans initiated by the National Retired Teachers Association have reported phenomenal success in changing attitudes of the young toward aging and the aged.

Suggested Activities and Strategies

Bring older adults into the classroom. In many schools across the nation, retirees and other older citizens volunteer to serve in the schools in a variety of ways.

1. Older volunteers as tutors. In New York, Los Angeles and Miami, hundreds of elders have served as tutors in the public schools with surprising results. The greater patience

of many older tutors makes them ideal for working with slow learners, and the tutor finds that the child's success fulfills his own personal needs. Older tutors, particularly retired math teachers, would have little trouble mastering subject matter in your classroom, and would give your students an opportunity for a one-to-one relationship with an elder. Older volunteers also tend to be reliable; when they agree to come to tutor, they rarely miss a session. Teachers in the three programs mentioned above usually preferred them to younger volunteers. The older tutor can be a real boon to the student who is falling behind.

2. Older volunteers as guest speakers or teachers. In the schools of Ann Arbor, Michigan, older citizens, called "Grandpersons," are guest teachers in art classes, teaching such skills as lace making. Often students may ask what employment opportunities lie in the math field. Why not ask a retired accountant, statistician, or university professor of mathematics to talk to your classes about future employment opportunities in the math field? The students would gain insight into the field, and would benefit from interacting with the speaker. One alert dynamic speaker over age 65 can cause a student to readjust his thinking about aging and the aged.

3. Older volunteers as teacher's aides. Older volunteers have also proved their worth nationwide as classroom aides. An alert older volunteer can take many clerical and non-teaching

tasks off of your shoulders. Tasks like grading homework and tests, recording grades, duplicating hand-out materials, preparation of classroom materials, taking attendance, and bulletin board decoration can easily be assumed by a volunteer. Having a retired mathematics teacher as a classroom aide could be a real boon to you, providing you with more time to prepare your instruction, and perhaps provide advice based on many years of teaching experience. What young teacher could not benefit from having access to the wisdom and experiences of one who has followed the path before, one who has faced and solved the problems commonly encountered by beginning teachers?

In cases where school-wide or district-wide volunteer programs are undertaken, funding may be available. In the Ann Arbor program, the Retired Senior Volunteer Program (RSVP) supplies lunches and transportation for participating volunteers. For complete information on setting up funded volunteer programs, contact the National School Volunteer Program, Inc., 300 North Washington Street, Alexandria, Virginia 22314. For the individual teacher, however, the best way to begin is to contact local community service groups, "Golden-Age" clubs, and the like for leads. A small advertisement in a local newspaper might produce more willing volunteers that you can use. Often, older people in our society sit home, now knowing how to become more involved with the mainstream of life. Many would jump at the opportunity to be of service. Be sure, however, to screen applicants carefully; avoid selecting persons who reflect the myths and stereotypes that you are trying to counter.

OBJECTIVE 2:

Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

a. Examination of aging stereotypes.

b. Examiantion of common myths of aging.

Rationale

Even though examination of personal and societal attitudes should result as intergenerational relationships develop, it is better not to rely on chance. Since the common myths and stereotypes are accepted by most students as truth, one of the most effective means for teaching about aging is to challenge those myths and stereotypes directly. A student who believes that "you can't teach an old dog new tricks" is often motivated to learn more, when he suddenly realizes that the statement does not describe his grandparents, an elderly neighbor, or perhaps a dynamic 70 year old tutor. The same student may be equally startled to learn that aging has absolutely nothing to do with loss of teeth. Such revelations are motivating. The student begins to question the myths, and to seek the truth. He begins to think about aging. He re-examines his own attitudes.

Suggested Activities and Strategies

1. Class discussions. Capitalize on moments of opportunity; if a student should comment on old people in general, or on a particular older person, steer the class into a brief discussion of stereotypes and myths about aging and the aged. Often even a two minute exchange of ideas can generate in a student an awareness of aging and the aged, where previously there was none. The student so effected may recall his past intergenerational experiences and re-examine his past actions and attitudes. It is not intended that you, as a mathematics teacher, take the time from your classes to conduct formal instruction to meet this objective. In class aging education should be incidental in nature in the mathematics classroom; let your short class discussions grow naturally out of the intergenerational activities and experiences you have provided. Should you wish to formally teach about aging, a lively discussion can also serve as an excellent way to launch a classroom teaching unit.

2. Ask students, perhaps for extra credit, to read biographies of men and women who were productive and creative into their later years. Many mathematicians made their greatest contributions when they were in their "declining" years. When students have completed their reading, ask them how the persons about whom they have read fit the mold for "old" people. Should you desire to preface this assignment with a short discussion of stereotypes and a few of the myths

of aging, the unit bibliography lists several good references under "stereotypes." An excellent reference text, for teacher or student, is Bert K. Smith's Aging in America (Boston: Beacon Press, 1973), available in paperback for about $4.00. The book is well written and readable at the junior high/ middle school level. It presents a clear explanation of the aging process and the problems of the aged in America, as well as dealing with common myths and stereotypes. For the student who seems especially interested, reading the book on his own may prove a rewarding experience.

OBJECTIVE 5:

Provide preparation for aging, to include:

a. The need for lifespan learning.
b. Planning for use of leisure time and recreation.
c. Old age as a perspective, an achievement.
d. Death as a natural phenomenon.
e. Vocabulary building.

Rationale

Certainly, in giving students the knowledge and experiences inherent in objectives 1 through 4, we are preparing them for aging, but objective 5 addresses itself to building attitudes that will allow students to age gracefully, to approach middle age not only free from the myths of aging, but ready to live the last stages of life to their fullest. Smith's text offers several examples of people who reach their "golden years" only to find them far from golden. Retirement becomes a time of boredom, isolation and lack of purpose. The money that seemed sufficient for retirement some thirty years before, suddenly is not enough. Many approach their later years with dread, and do literally wait around to die.

This fifth objective is everyone's business. If, either incidentally or through more formalized instruction, each teacher is able to foster in students a belief that learning throughout life is a necessity; if teachers can interest students in sports, hobbies, and activities that will last a lifetime; if teachers can convince students that old age need not be a time of sadness; if teachers can ease the fears associated with death; if teachers can give students the words to bring their thoughts about life, death, and aging into the open, then those students may reach their later years prepared psychologically and physically for a life that is truly "golden."

Suggested Activities and Strategies

1. In the area of nurturing the desire for lifespan learning, formal instruction is probably best left to the science teacher, who can nicely tie the topic into instruction on changes associated with aging. Incidental teaching opportunities will likely occur during discussions of aging in the classroom, particularly if students have been exposed to an alert and knowledgeable older volunteer or two.

2. Perhaps the best thing any teacher can do to encourage planning for use of leisure time is to try to get students

to realize that those elderly persons who survive best and have the happiest lives after retirement are those who early in their lives developed interests and avocations of an ageless nature. You can capitalize on chance opportunities to encourage students to pursue such interests. Recreational reading is one lifetime habit well worth encouraging in every classroom. Specific suggestions for accomplishing this in the mathematics classroom may be found in Improving Reading in Every Class, by Ellen Thomas and H. A. Robinson (Boston: Allyn and Bacon, 1972). Students who show the slightest interest in reading when they are not required to should be strongly encouraged to continue.

3. The mathematics teacher can also teach incidentally to foster attitude toward old age by pointing out how it can be viewed as an achievement, as a perspective on life. A student comment which reflects a view of old age as a time of sadness and depression may provide you the opportunity to refute a myth or two. Smith provides several good examples of older citizens whose retirements are "golden" times of happiness, security, good health, and freedom. Those elders who plan well and heed their own accumulated wisdom seldom make the errors of youth. Old age, free from serious illness, can indeed be the best time.

4. Death is a topic that has been avoided in our society. Only recently has there been an interest in the subject in the public school. Death is probably best approached from

the social studies area at the junior high/middle school level, where students can examine attitudes toward death in our society. It is recommended that your involvement be limited to incidental teaching, aimed at characterizing death and dying as normal parts of the life process, and common to all living organisms. A student of yours, who is studying death and dying in another class, might approach you concerning the subject. The manner of your reply may either refute or reinforce his attitudes toward the subject. If you can openly reflect a positive attitude toward death, an acceptance of it as an integral part of life, his own fears may be eased. If your answer reflects fear or reluctance to discuss death, he may see his own fears as confirmed. If, for some reason, you should desire to approach the subject formally in your classroom, the references listed in the unit bibliography will prove helpful; they all present death in a positive light.

5. One result of a study by Jantz and Seefeldt at the University of Maryland (1976) on children's perceptions of age was that children who exhibit the least understanding of aging and knowledge of older people have in their vocabularies only a handful of terms referring to old age. Since vocabulary growth is commonly dependent upon breadth of experience, it is reasonable to suspect that your students might exhibit the same type of correlation between understanding and vocabulary. Vocabulary may therefore serve as an indicator of

a student's level of knowledge and experience with aging and the aged. If students are to do any reading on their own about the aging process, they will need to enlarge their vocabularies. Some of the activities suggested by the Thomas and Robinson text noted above are applicable to helping to build an aging vocabulary in the mathematics classroom.

CONCLUSION:

Although this unit is nearly ended, you are not yet ready to introduce aging education into your classroom. The unit has provided you with valid general course objectives for teaching about aging. It has suggested activities and strategies for meeting those objectives; it has recommended texts and films as resources and classroom aids.

Now it is your turn. Your class is unique; your students are individuals with specific needs. Based on your knowledge of your particular teaching situation, availability of resoruces and materials, and the needs of your students, you should tailer this unit to your teaching needs. Pick and choose the strategies that will work in your classroom with your students. Select carefully from what is offered and arrange it to be most effective in your hands. It is up to you to structure the specific course of study. You should be able to set specific objectives which will result in fulfillment of the larger course objectives. The purpose of this unit has been to point the direction, to provide the starting point, and to walk down the road with you a bit. From here on, the success of aging education in your classroom depends on you.

AGING EDUCATION
FOR
PHYSICAL EDUCATION CLASSES:
JUNIOR HIGH/MIDDLE SCHOOL

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INTRODUCTION:

Why should you, a teacher of physical education, want to teach about aging and the aged? Why should you even continue examining this teaching unit? There are many good reasons:

1. Everyone ages; it is a continuing lifespan process. Yet most Americans are ignorant as to what aging is; they commonly accept a mythology of aging which paints the aging process as something to be feared. Aging education can disprove the myths.

2. Most Americans fear aging and, particularly, "old age." People see growing older as a path to death; old age is the time during which one waits to die. It is often a time of illness, economic insecurity and depression. Aging education can ease the fear.

3. Children, as young as pre-school, note differences in adults of differing ages. By the time a student reaches your classroom, he has had six to seven years exposure to the myths of aging. The older he gets, the more he will think about aging, the more his fears will grow. Negative attitudes, and resultant behavior toward older persons, begin to form early. Studies of children's perceptions of age (Hickey and Kalish, 1968; Hickey, Hickey, and Kalish, 1968; Jantz and Seefeldt, 1976) document the gradual formation of these negative attitudes and beliefs.

4. Research indicates that you can effectively alter these attitudes in your classroom. Studies like that by Baltes

and Labouvie-Vief (1976) show what can be accomplished in only a short period of time with standard types of classroom materials. Other programs, which have utilized "intergenerational relationships," social interaction between young and old, have achieved phenomenal success in relatively short periods of time.

5. Students react positively and enthusiastically to aging education. Student responses to programs like the Teaching-Learning Communities (T-LC) program in Ann Arbor, which brings older citizens into art classes to teach skills such as lace making, have been excellent (Mehta, 1976). Reactions to other intergenerational programs across the nation have ranged from good to outstanding.

6. Students exhibit a high degree of interest in aging and the aged, once they get into the subject. Knowledge about aging provides answers to questions they have about their own aging, and that of their parents, grandparents, and friends. Students perceive the subject as very relevant to life as they are living it.

7. Bureau of the Census projections indicate that, by the year 1000, one out of every five persons will be over 65 years of age. Your students will likely find themselves in the 21st Century, part of a society that caters to the older citizen, in much the same way as today's society emphasizes youthful interests. What a sad situation it may be, if a majority of those elders accept the negative myths of aging, and are

unaware of the facts. "Old" people, like students in the classroom, tend to live up to our expectations of them.

OBJECTIVES:

In late 1976, a group of leaders in the development of aging curriculum materials for the public school were polled to determine the areas within the broad field of aging that should be part of a K-12 curriculum on aging in a public school. From the consensus of opinion of these experts evolved a K-12 listing of objectives for public school aging curricula. The researcher categorized the objectives by grade level. The objectives defined for the junior high/middle school level are as follow:

1. Provide opportunities for the establishment of intergenerational relationships.

2. Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

    a. Examination of aging stereotypes.
    b. Examination of common myths of aging.

3. Provide a profile of the aged in America, past, present and future, to include:

    a. Demographic data to support trends.
    b. Comparison with other times and cultures.
    c. Retirement in America.
    d. Institutionalization in America.

4. Provide an understanding of aging as a lifespan process, to include:
    a. The general life stages through which we age.
    b. The visible biological and psychological changes resulting from the aging process.
5. Provide preparation for aging, to include:
    a. The need for lifespan learning.
    b. Planning for use of leisure time and recreation.
    c. Old age as a perspective, an achievement.
    d. Death as a natural phenomenon.
    e. Vocabulary building.

PROCEDURES: ORGANIZATION AND EVALUATION:

Any unit on aging, then, should strive to meet these five objectives, or as many as seem appropriate to a given subject area. Objectives 1 and 2 are felt to be applicable to all subject areas. Objective 3 seems well suited to the social studies; objective 4 to the sciences. Parts of objective 5 are suited to almost every area. Where then, you may ask, does physical education come in? Unless you are the only teacher in the building dealing with the subject of aging, and have a strong desire to teach a mini-unit on the subject, it is recommended that you concern yourself only with objectives 1, 2 and 5. If, after reading this unit, you believe that aging education should occur in other classes at the junior high/middle school levels, then why not approach your colleagues in social studies, science and English and urge them to consider becoming involved: As part of this series, there are teaching units designed to show them how to approach the subject in each of their areas. Ask them to examine the materials and decide for themselves.

Meeting the objectives cited for physical education does not require any formal classroom teaching, nor does it call for any type of evaluation other than teacher observation. The major purposes of aging education in the physical education class are to teach physical fitness skills and sports that can be practiced at all stages of life, to expose students to intergenerational experiences, and to capitalize on incidental teaching opportunities which may cause the student to paude and re-examine his own attitudes and beliefs. Facts learned in lectures would definitely affect student attitudes toward aging and the aged, but, in order to achieve long lasting behavioral and attitudinal change, the student must experience contact with older adults. One does not learn to hit a baseball by reading a book about it; one picks up a bat and swings. Likewise, cognitive learning of the factual matter of aging is insufficient. Intergenerational relationships are the key to effective aging curricula. Experiences with older persons, coupled with basic factual knowledge, should result in long lasting attitudinal change. Generally speaking, your involvement with aging education might be structured as follows. Plan to teach physical fitness skills and sports that a student can utilize into his later years. Football and soccer are fine team sports; wrestling is an excellent body builder for the individual. These sports, however, call for a degree of physical conditioning that the aging process does not permit at more advanced ages. Include in your course of study some experiences with tennis, gold, jogging, swimming, hiking and camping. All of these can be equally enjoyable for persons of all ages. During the first week of class, inform students that a number of intergenerational esperiences are in store, in the form of older volunteers serving as teacher's aides, skills tutors, and guest speakers. You might even arrange to pair your class up with a local "Golden-Age" group to attend a local tennis or golf tournament, or a football game. At the school year progresses, should a student comment on how alert and knowledgeable a certain volunteer is for a man of 67, you may find that the time is right for a brief discussion of stereotypes.

TEACHING THE UNIT:

The remainder of this unit is concerned with specific suggestions for integrating aging education into your classes by meeting objectives 1, 2, and parts of objective 5. Materials will be arranged as follows:

1. A statement of the objectives.
2. A brief rationale for the objective.
3. Suggested activities and strategies.

Included also is a listing of recommended films and a bibliography of references aimed at teaching about aged and the aged at the junior high/middle school level. Should you desire more involvement in your classes with aging education, these sources will prove valuable. Additional strategies and activities for meeting all five objectives are included in other units in this series.

OBJECTIVE 1:

Provide opportunities for the establishment of intergenerational relationships.

Rationale

Analysis of the results of programs which rely heavily on the effects of intergenerational experiences suggests that the key to successful aging education is exposure of the young to situations in which they may come to know an "old" person on a one-to-one basis. Such nationwide programs as the Generations Alliance Program of the American Association of Retired Persons, the Hand-in-Hand Cross Age Interactions Project of the Girl Scouts of America, and the Youth Conferences on Older Americans initiated by the National Retired Teachers Association have reported phenomenal success in changing attitudes of the young toward aging and the aged.

Suggested Activities and Strategies

1. Bring older adults into the classroom. In many schools across the nation, retirees and other older citizens volunteer

to serve in the schools in a variety of ways. In New York, Los Angeles, and Miami, elders serve as tutors in the public schools, with surprising results. The greater patience of many older tutors make them ideal for working with slow learners; the tutors find their volunteering meets a real personal need. In the schools of Ann Arbor, Michigan, older citizens, called "Grandpersons," are guest teachers in art classes, teaching such skills as lace making. Consider the value of having a retired golf pro or former football star come into your classes to talk about his sport and pass on a few pointers. Indeed, there may be as colorful a figure as Julius Boros or Pancho Gonzales living in your own community. Retired sports figures often make excellent speakers, and every community has its own local sports heroes from the past. Older volunteers may also serve as teacher's aides, with duties ranging from tutoring, through preparation of teaching materials and equipment, to clerical duties. In cases where school-wide or district-wide volunteer programs are undertaken, funding may be available. In the Ann Arbor program, the Retired Senior Volunteer Program (RSVP) supplies lunches and transportation for participating volunteers. For complete information on setting up funded volunteer programs, contact the National School Volunteer Program, Inc., 300 North Washington Street, Alexandria, Virginia, 22314. For the individual teacher, however, the best way to begin is to contact local community service groups, YMCAs, "Golden-Age" clubs, and the like for leads. A small advertisement in a local newspaper might produce more willing volunteers than you can use. Often, older people in our society sit at home, not knowing how to become more involved in the mainstream of life. Many would jump at the opportunity to be of service. Be sure, however, to screen all applicants carefully to avoid selecting older persons who reflect the myths and stereotypes that you are trying to counter. Look for the dynamic and alert individuals who exemplify the realities, whose lives refute the common myths.

2. Take a mixed group of young and old on a field trip. Ask your students to undertake a community service project in partnership with a local "Golden-Age" club, garden club, or a similar organization. During the summer of 1976, the San Francisco Bay area Girl Scout Council sponsored a group of teenagers and elders on a field trip to trace the route followed by Lewis and Clark. Certainly, in any geographic area, there are sporting events worthy of a field trip. A trip to a local game or tournament might be a good way to begin.

OBJECTIVE 2:

Provide opportunities for examination of personal and societal attitudes toward aging and the aged, to include:

a. Examination of aging stereotypes.

b. Examination of common myths of aging.

Rationale

Even though examination of personal and societal attitudes should result as intergenerational relationships develop, it is not enough to rely on chance. Sicne the common stereotypes and myths of aging are accepts as truth by most students, one of the most effective strategies for teaching about aging is to challenge those stereotypes and myths directly. A student who has always believed that "you can't teach an old dog new tricks" is often motivated to learn more, when he finds out that the statement is not true of his grandfather or an aged neighbor. He may also be startled to learn that age has nothing whatsoever to do with loss of teeth. Such revelations are motivating; the student begins to question, to seek the truth.

Suggested Activities and Strategies

1. Class discussions. Capitalize on moments of opportunity; if a student comments on old people in general, or on a particular older person, steer the class into a brief discussion of stereotypes and myths about aging and the aged. Often, even a two minute exchange of ideas can generate awareness of aging and the aged, where previously none existed. The student so effected may recall his past intergenerational experiences and re-examine his past actions and attitudes. Should you wish to formally teach about aging in your classes, a lively discussion may also serve to launch a teaching unit.

2. Ask students, for extra credit perhaps, to read

biographies of athletes who remained active into their later years. When students have completed their reading, they might report on how the athlete about whom they read fits the mold for "old" people. Should you desire to preface this assignment with a short discussion of stereotypes and a few of the myths of aging, the unit bibliography lists several good references under "stereotypes." An excellent text, for teacher or student, is Bert K. Smith's Aging in America (Boston: Beacon Press, 1973), available in paperback for about $4.00. It is well written and readable at the junior high/middle school level. The book presents a clear explanation of the processes of aging and the problems of the aged in America. For the student who seems especially interested, reading the book on his own may prove a rewarding experience.

OBJECTIVE 5:

Provide preparation for aging, to include:

a. The need for lifespan learning.
b. Planning for use of leisure time and recreation.
c. Old age as a perspective, an achievement.
d. Death as a natural phenomena.
e. Vocabulary building

Rationale

Certainly, in giving students the knowledge and experiences inherent in objectives 1 through 4, we are preparing them for aging, but objective 5 addresses itself to building attitudes that will allow students to age gracefully, to approach middle age not only free from the myths of aging, but ready to live the last stages of life to their fullest. Smith's text offers several examples of persons who reach their "golden years" only to find them far from golden. Retirement becomes a time of boredom, isolation, lack of purpose. The money that seemed sufficient for retirement thirty years before suddenly is not enough. Many approach their later years with dread, and literally wait around to die.

The fifth objective is everyone's business. If either incidentally or through more formalized instruction, each teacher is able to foster in students a belief that learning throughout life is a necessity; if teachers can interest students in sports, hobbies and activities that will last a lifetime; if teachers can convince students that old age need not be a time of sadness; if teachers can help to ease the fear associated with death; if teachers can give students the words to bring their thoughts about life, death and aging into the open, then those students may reach their later years prepared psychologically and physically for a life that is truly "golden."

Suggested Activities and Strategies

1. In the area of nurturing a desire for lifespan learning, formal instruction is probably bestleft to the science teacher, who can nicely tie the topic into instruction

on changes associated with aging. Incidental teaching opportunities will likely occur during discussions of aging in class, particularly if students have been exposed to an alert and knowledgeable volunteer or two.

2. Perhaps the best thing any teacher can do to encourage planning for leisure time is to try to get students to realize that those elderly persons who best survive and have the happiest lives after retirement are those who early in their lives developed interests and avocations of an ageless nature. Teachers in all areas can capitalize on chance opportunities to encourage students to pursue such interests. Recreational reading is one lifetime habit well worth encouraging in every class. Specific suggestions for accomplishing this in the physical education class may be found in Improving Reading in Every Class, by Ellen Thomas and H. A. Robinson (Boston: Allyn and Bacon, 1972). Students who show the slightest interest in reading when they are not required to should be strongly encouraged to continue.

3. Conduct a mini-unit on the relationship between physical fitness and age. Information to support such a unit, perhaps only one class period in length, may be found in the following references:

a. deVries, H.A. Education for physical fitness in the later years. In S. Grabowski and W.D. Mason (eds.) Education for the aging. Washington: ERIC, 1974.

b. deVries, H. A. Vigor retained. Englewood Cliffs: Prentice-Hall, 1974.

c. Kasch, F. W., and Boyer, J. L. Adult fitness: principles and practice. Philadelphia: Lippincott, 1971.

d. Taylor, R. B. Feeling alive after 65. New Rochelle, N.Y.: Arlington House, 1973.

e. Winter, R. Ageless aging. New York: Crown Publishers, 1973.

4. Base a discussion of the relationship between physical fitness and aging on a film. The film "The Flabby American" (27 minutes/black and white, 1963), which portrays the importance of physical fitness and exercise to good health, can lead to a lively discussion of the importance of physical fitness to a long and healthy life. It can provide an introduction to the teaching of sports and physical fitness skills that can last the student a lifetime. The film is available from the University of Southern California, Division of Cinema, Film Distribution Section, University Park, Los Angeles, California, 90007, for a rental fee of $7.50.

5. Equip students for the future by teaching physical fitness skills and sports that they can utilize throughout their lives. Include in your course of study such sports as golf and swimming, sports that can be played with enthusiasm by young and old alike. Jogging and hiking are also sports of an ageless sort.

6. Death is a topic that has been avoided in our society. Only recently has there been an interest in the subject in the public school. Death is probably best approached from the social studies area at the junior high/middle school level, where students can examine attitudes toward death and dying in our society. It is recommended that your involvement be limited to incidental teaching, aimed at characterizing death and dying as integral parts of the life process, and common to all living organisms. If, for some reason, you should desire to approach the subject formally in your classes, the references listed in the unit bibliography will prove helpful; they all present death in a positive manner.

7. One result of a study by Jantz and Seefeldt at the University of Maryland (1976) on children's perceptions of age was that children who exhibit the least understanding of aging and knowledge of older people have in their vocabularies only a handful of terms referring to old age. Since vocabulary growth is commonly dependent upon breadth of experience, it is reasonable to suspect that your students might exhibit the same type of correlation between understanding and vocabulary. Vocabulary may, therefore, serve as an indicator of a student's level of knowledge and experience with aging and the aged. If students are to do any reading on their own about the aging process, they will need to know some of the basic terms connected with aging. Some of the activities suggested by the Thomas and Robinson text noted above are

applicable to helping to build an aging vocabulary in a physical education class.

CONCLUSION:

Although this unit is nearly ended, you are not yet ready to introduce aging education into your classroom. The unit has provided you with valid general course objectives for teaching about aging at the junior high/middle school level. It has suggested activities and strategies for meeting those objectives; it has recommended texts and films as resources and classroom aids.

Now it is your turn. Your class is unique; your students are individuals with specific needs. Based on your knowledge of your particular teaching situation, availability of resources and materials, and the needs of your students, you should tailor this unit to fit your teaching needs. Pick and choose the strategies that will work in your classroom with your students. Select carefully from what is offered and arrange it to be most effective in your hands. It is up to you to structure the specific course of study. You should be able to set specific objectives which will result in fulfillment of the larger course objectives. The purpose of this unit has been to point the direction, to provide the starting point, and to walk down the road with you a bit. From here on, the success of aging education in your classroom depends on you.

NOTES

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Mehta, M. Charting the grandperson galaxy. Phi Delta Kappan, November, 1976, 58, 244-247.

U.S. Department of Commerce, Bureau of the Census. 1970 census of population characteristics of the population, United States summary. Washington, D.C.: U.S. Government Printing Office, 1973. (Table 53)

REFERENCES FOR FURTHER STUDY

Persons desiring a more in-depth knowledge of a given area, or wider knowledge of the broad field of aging, should find the following sources useful:

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3. deBeauvoir, S. The coming of age. New York: Warner Paperback Library, 1973.
4. Fischer, D. Growing old in America. Oxford University Press, 1977.
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6. Milne, L. The how and why of growing. New York: Atheneum Press, 1972. This is an excellent student text at the junior high level.
7. Neugarten, B.L. Middle age and aging. Chicago, University of Chicago Press, 1968.
8. Smith, B.K. Aging in America. Boston: Beacon Press, 1973. This is an excellent student text at junior high level and higher.
9. Tibbits, C. (Ed.). Handbook of social gerontology: societal aspects of aging. Chicago: University of Chicago Press, 1961.

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1. Atwood, H. M. (Ed.). Activities for teaching about aging: primary and intermediate grades. Muncie: Ball State University, 1975. Excellent source of activities by subject area that may be adapted to junior high level. Includes lengthy bibliography and listing of films on aging.
2. Bradley, L., and Esporite, B. (Eds.). Curriculum materials on aging for elementary and secondary schools. Columbus: The Ohio Commission on Aging, in press. Contains both activities and materials for elementary, and teaching units for major subject areas at junior high level and above.

3. Cameron, J.J. Views of aging. Ann Arbor: Institute of Gerontology, the University of Michigan -- Wayne State University, 1976. Features several approaches to teaching about aging; offers suggested activities for major subject areas at secondary level. Contains bibliography and several excellent related papers.
4. Cole, W., and Harris, D. The elderly in America. Boston: Allyn and Bacon, 1977. A well done resource for high school level and above, with comprehensive teacher's guide.
5. Gross, P. Unit on aging: grades 4-6. San Jose: San Jose State University, 1975. Primarily for use at grade levels indicated, but adaptable to others.
6. Jacobs, H. L. Youth looks at aging (2nd. ed.). Iowa City: the University of Iowa, 1969. Deals with 18 of the questions about aging and the aged most asked by adolescents and young adults. Aimed at secondary use, a complete teaching unit crammed with valuable information and suggestions. Extensive bibliography.
7. Jantz, R.K., Seefeldt, C. et al. Curriculum guide: children's attitudes toward the elderly. College Park: The Center on Aging, The University of Maryland, 1976. Contains objectives and activities for children, preschool through grade six.
8. Myers, J. "Aging curricula for the public school: objectives and materials". (unpublished dissertation) The University of Akron, 1977. Contains a listing of classroom objectives, K-12, and five teaching units in the content areas of English, science, social studies, mathematics, and health and physical education.
9. Paranya, A. Unit on aging taught in Lexington High School. ERIC Clearinghouse for Education, 1974. For use in high school sociology (family) classes originally. Can be taught in four class sessions; contains objectives, strategies, bibliography, and course evaluation information.
10. Pratt, F. Teaching about aging: a teacher's sourcebook. Washington: The National Retired Tachers Association, pending publication. A thorough and comprehensive resource for secondary level teachers.
11. Pratt, F. Teaching about aging. Boulder, Colorado: ERIC Clearinghouse for Social Studies (SO 009 716), 1977. Good resource for use at high school level.
12. Rashkis, Z. Grow old along with me, from Thematic Units in Teaching English and the Humanities. Urbana: National Council of Teachers of English, 1976.

13. Saxe, A. The young look at the old: Curriculum building in the area of aging. San Jose: San Jose State University, 1977. Provides guidance on developing courses on teaching about aging. Includes sample teaching materials and resource list.
14. Smith, G. A comparative view of aging. Denver: Center for Teaching International Relations, University of Denver, 1976.
15. ______________. Handbook for curricula on the concepts of aging. Sacramento: Division of Adult and Community Education, California State Department of Education, 1977. An excellent elementary and secondary resource. Offers a variety of classroom goals and suggestions for accomplishing them. Includes an excellent bibliography.

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2. ___________. A comprehensive bibliography in educational gerontology. Ann Arbor: Institute of Gerontology, the University of Michigan, 1971. Covers 20 separate subject areas, 153 pages in length; available from Publications Distribution, Institute of Gerontology, the University of Michigan, 520 Liberty Street, Ann Arbor, Michigan, 48109, at a cost of $2.95.

CHILDRENS' PERCEPTIONS OF AGE

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2. Durkee, R., and Kastenbaum, R. Young people view old age. In R. Kastenbaum (Ed.) New Thoughts on Old Age. New York: Springer, 1964.
3. Lane, B. Attitudes of youth toward the aged. Journal of Marriage and the Family, 1964, 26, 229-231.
4. McTavish, D. G. Perceptions of old people: a review of research methodologies and findings. The Gerontologist, Winter 1971, 11 (part II), 90-101. Valuable review of important studies and their findings. Starting place for persons interested in an experimental approach to the literature of intergenerational relationships.

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DEATH AND DYING

1. Grollman, E. A. Explaining death to children. Boston: Beacon Press, 1969. Effective for giving teachers and parents insight as to how to initially approach the subject. Valuable for both elementary and junior high level teachers.
2. Hendon, D. Death as a fact of life. New York: W. W. Norton, 1973.
3. Kubler-Ross, E. Death: the final stage of life. Englewood Cliffs: Prentice-Hall, 1975. Reflects a positive attitude toward death. Examines the nature of death and how various cultures cope with it.

4. Kubler-Ross, E. *On death and dying*. New York: MacMillan, 1970.

5. Moody, R. A. *Life after life*. New York: Bantam, 1975. Relates experiences of those who had medically died, and then been revived. Supports positive view toward death, seeing it as a gate to another form of existance. Beware possible conflicts with student religious beliefs.

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4. Hess, B. B. Stereotypes of the aged. *Journal of Communication*, Autumn 1974, *24*, 76-85.

FILMS AND FILM SOURCES

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2. *About Aging: A Catalogue of Films*. A good listing of films covering many topics, available from the Ethel Percy Andrus Gerontology Center, University of Southern California, University Park, Los Angeles, California, 96007; Price: $3.50.

3. *AoA Films on Aging*. Available from the Superintendent of Documents, United States Government Printing Office, Washington, D.C., 20402; Price: $.60.

4. *Films on Death and Dying*. Available from Educational Film Library Assoc., 17 West 60th St., New York 10023: Price: $.75.

5. *Media Sources: A Comprehensive Listing*. A sixty page guide, listing over 250 films, filmstrips, slide programs, transparencies, and audio tapes in eleven subject areas, including "Aging," "Retirement," and "Death and Dying," available from Publications Distribution, Institute of Gerontology, The University of Michigan, 520 Liberty Street, Ann Arbor, Michigan, 48109; Price: $1.95.

CULTURAL DIFFERENCES

1. "Old Age," 45 min/color. How various nations cope with old age. Available from the Indiana State Library, 140 N. Senate Avenue, Indianapolis, Indiana, 46204; Free Loan.

DYNAMIC ELDERS

1. "Don't Stop the Music," 18 min/color. Older Americans speak for themselves; speakers are rugged individualists and an assortment of other types, including common stereotypes. Effective for dispelling myths about the aged. Available from the Administration on Aging, US Department of Health, Education, and Welfare, 400 6th Street S.W., Donohoe Building, Washington, D.C., 20201; Free loan.
2. "Inside -- Outside," 29 min/black and white, 1970. Good introduction to aging, both its good and bad aspects. Good for initiating classroom discussion. Available from Indiana University Auido-Visual Center, Bloomington, Indiana, 47410; Price $5.80.

HISTORY OF AGING IN AMERICA

1. "Our Changing Family Life," 22 min/black & white, 1957. Changes in American economic and social life since 1880. Available from Audio-Visual Center, Division of Extension and University Services, The University of Iowa, Iowa City, Iowa, 52240; Price: $4.00.

INSTITUTIONALIZATION

1. "Peege," 28 min/color. Traditional visit to Grandma, but she is in a nursing home. Viewed through perspective of visiting family members until last scene; a powerful and effective film. Available from Phoenix Films, Inc., 470 Park Avenue South, New York, N.Y1, 10016; Purchase: $395.00; Rental: $40.00.

INTERGENERATIONAL RELATIONSHIPS

1. "Grandpa," 12 min/black & white, 1962. Young boy and his grandfather walk along a railroad track talking; stresses responsibility of young to old, and vice versa. Available from the University of Iowa Audio-Visual Center, Iowa City, Iow, 52240; Price: Contact for details.
2. "When Generations Meet," 30 min/color. Sensitizes young people to the aged; shows the potentials of intergenerational relationships for young and old alike. Examines relationships between a group of high school students and residents of an institution for the aged. Demonstrates effects of role playing in helping a group of 14 year olds experience some of the

losses of being old. Available from E. Feil Productions, 4614 Prospect Avenue, Cleveland, Ohio, 44103; Purchase: $200.00 plus mailing; Rental: $15.00 plus mailing.

PREPARATION FOR AGING

1. "The Adventure of Learning," (Aspects of Aging Series), 30 min/black & white. Stresses learning as a lifetime pursuit. Available from James H. Goff, Executive Producer, 41 Davis Hall, University of Rhode Island, Kingston, Rhode Island, 02881; Free for one time use.
2. "The Art of Age," 27 min/color, 1972. Portrays the lives of four elders who live life to the fullest; stresses lifelong learning and old age as a valued perspective on life. Available from the Indianapolis Public Library, 40 E. St. Clair, Indianapolis, Indiana 46204; Free loan.

PROGRESS OF AGING

1. "Aging" (Developmental Psychology Series), 22 min/black & white/ 1973. Discusses three common aging patterns; activity, disengagement, and holding on. Available from Communications Research Machines, Inc., Del Mar, California, 92014; Price $35.00.
2. "The Mystery of Aging (Part 1)," 29 min/color. Looks at the biological aspects of aging. Available free from the Upjohn Company, Kalamazoo, Michigan.
3. "The Mystery of Aging (Part 2)," 29 min/color. Looks at the societal and psychological aspects of aging. Available free from Upjohn.

RETIREMENT

1. "Golden Age," 30 min/black & white, 1958. Three men effected differently by retirement at age 65. Available from the University of Michigan Audio-Visual Center, 416 Fourth St., Ann Arbor, Michigan, 48104; Price: $5.75.
2. "I Think They Call Him John," 26 min/black & white, 1970. One retiree's monotonous routine for day to day existance; retirement at its isolated worst. Available from Indiana University Audio-Visual Center, Bloomington, Indiana, 47410; Price: $9.25.
3. "The Rest of Your Life," 28 min/color. Available from the Purdue University Audio-Visual Center, Stewart center, West Lafayette, Indiana, 47907; Price: $10.00.
4. "The 64th Birthday," 4 min/black & white. Deals with feelings of a married couple on his 64th birthday. A good introductory film to retirement. Available from the University of Michigan Audio-Visual Center, 416 Fourth Street, Ann Arbor, Michigan, 48104; Price: $1.50.

SIMULATION

1. "Brookside Manor," by D. Coons and J. Bykowsli. Concerns aged persons forced to leave their own home. Effective for sensitizing young people to the problems of the aged. Available from Publications Distribution, Institute of Gerontology, the University of Michigan, 520 E. Liberty Street, Ann Arbor, Michigan, 48109; Price: $5.00.